PIONEER
The future of sound and vision.

Service Manual

ORDER NO.
ARP2082

PROJECTION MONITOR RECEIVER

SD-P5047-Q

SD-P5043-K SD-P504-K
SD-P5043-Q SD-P504-Q
PRO-93 PRO-73

MODELS OF THE FOLLOWING TABLES HAVE THREE VERSIONS :

Type	Applicable model (Appearance is indicated in the ( ).)				Power requirement	Export destination
	SD-P5047-Q (oak with door)	SD-P504-Q (oak without door)	SD-P504-K (black without door)	SD-P5043-Q (oak without door)		
KUX1C	○	○	○	○	AC 120V only	U. S. A

Type	Applicable model (Appearance is indicated in the ( ).)				Power requirement	Export destination
	SD-P5043-K (black without door)	SD-P5046-K (black without door)	PRO-93 (black without door)	PRO-73 (black without door)		
KUX1C	○	○	○	○	AC 120V only	U. S. A
KC	○	—	—	—	AC 120V only	Canada

Type	Applicable model (Appearance is indicated in the ( ).)	Power requirement	Export destination
	SD-P5004 (black without door)		
S	○	AC110V,120V-127V,220V,240V (switchable)	U. S. Military

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- **This manual is applicable to the above-mentioned types except for KC and S types.**
- **As to the SD-P5043-K, SD-P5043-Q, SD-P504-K, SD-P504-Q, PRO-93 and PRO-73 /KUX1C types, refer to pages 125.**
- **As to the other types, refer to additional service manual.**
- **This service manual is combined with operating instructions (from pages 147).**

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This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.

The following precautions should be observed :

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled.
   Keep picture tube away from the body while handling.
2. When service is required, even though the SD-P5047-Q an isolation transformer should be inserted between power line and the set in safety before any service is performed.
3. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
4. When service is required, observe the original lead dress.
   Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacturer's replacement components.
   Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacturer has become defective, or inadvertently defeated during servicing.

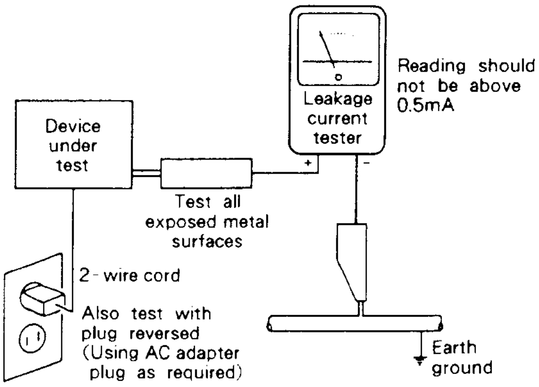
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power switch on. Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Device under test
Leakage current tester
Reading should not be above 0.5mA
+
-
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

High Voltage

This set is provided with a X-ray protection for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this X-ray protection may correctly be operated.

Serviceman Warning

In the status of the black picture (video muting is being applied) when no signal is input, high voltage of this set during operation is less than 31.4kV. In case any component having some relation to the high voltage is replaced, confirm that the high voltage is lower than 31.4kV in the status of the black picture when no signal is input.

X-radiation

TUBE : The primary source of X-radiation in this set is the picture tube.

For continued X-radiation protection, the replacement tube must be the same type as the original, PIONEER approved type.

The picture tube (CRT assembly R, G, B) used in this set holds complete guarantee against X-ray radiation when the X-ray is sealed (See on page 6). Accordingly, when the current in flowing to the picture tube (CRT assembly R, G, B), be sure to perform it by putting the tube into X-ray sealed applied state. Avoid absolutely to flow the current to the picture tube (CRT assembly R, G, B) itself. Moreover, when the voltage of the high voltage circuit becomes abnormally a little higher, the picture tube radiates X-rays. Accordingly, when servicing the high voltage circuit be sure to replace as an assembly with the POWER SUPPLY • DEFLECTION assembly (AWV1146) in the manner in which has been adjusted to perform normal operation.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

3. CHARGED SECTION, HIGH VOLTAGE GENERATING POINT AND X-RAY PROTECTION

■ Charged section

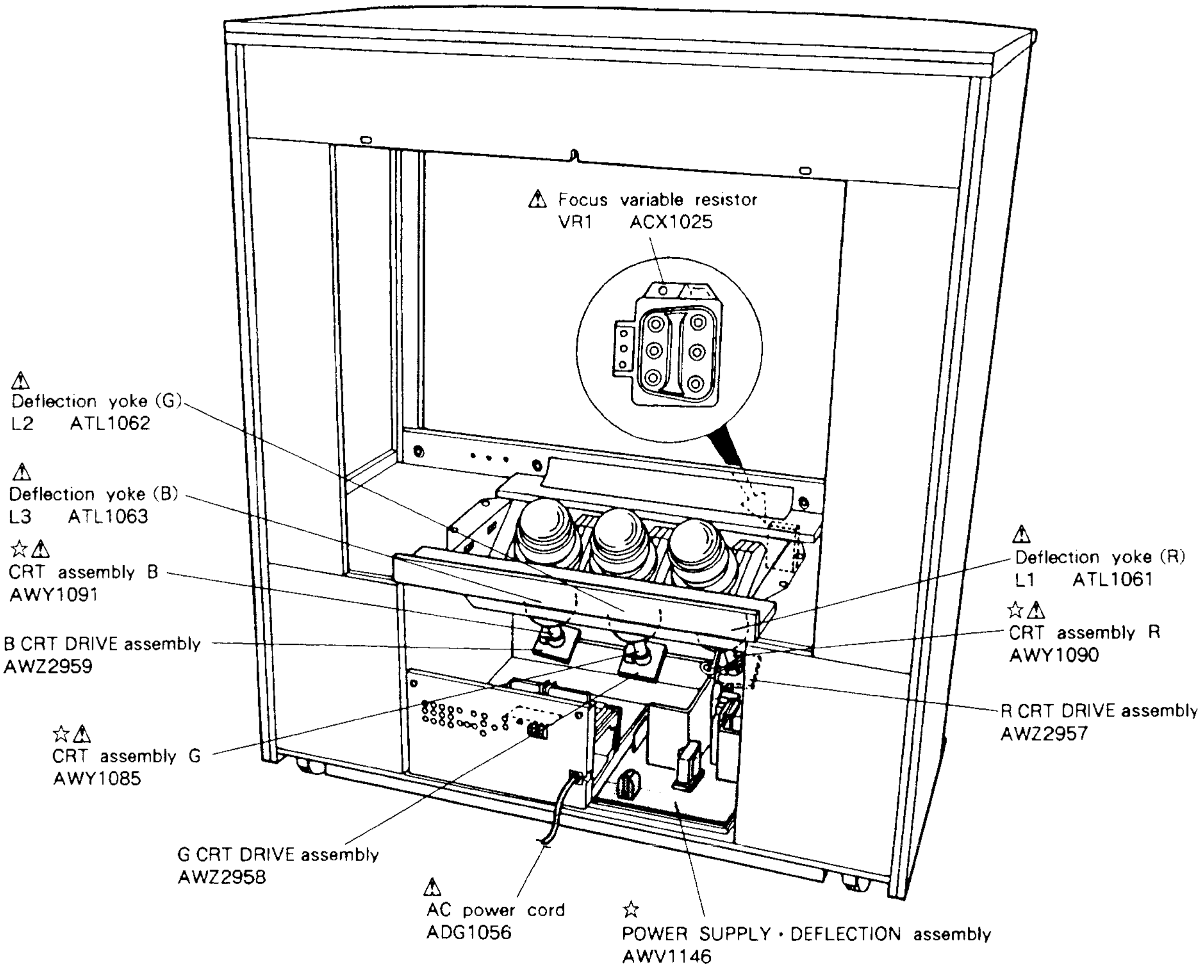
The circuit in which the commercial AC power is used as it is without passing through the power supply transformer. If the charged section is touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. In this case, be sure to connect the set via an insulated transformer and supply the current.

■ Charged section (Power supply primary side)

1. The primary side of the POWER SUPPLY・DEFLECTION assembly	AWV1146
2. AC power cord	ADG1056

part is the charged section.

part is the high voltage generating points other than the charged section.



⚠ Focus variable resistor
VR1 ACX1025
⚠
Deflection yoke (G)
L2 ATL1062
⚠
Deflection yoke (B)
L3 ATL1063
☆⚠
CRT assembly B
AWY1091
B CRT DRIVE assembly
AWZ2959
☆⚠
CRT assembly G
AWY1085
G CRT DRIVE assembly
AWZ2958
⚠
AC power cord
ADG1056
☆
POWER SUPPLY・DEFLECTION assembly
AWV1146
⚠
Deflection yoke (R)
L1 ATL1061
☆⚠
CRT assembly R
AWY1090
R CRT DRIVE assembly
AWZ2957

Fig. 3-1 Charged section and high voltage generating point

■ High voltage generating point

The place where voltage of over 100V is generated.

1. Charged section
2. POWER SUPPLY・DEFLECTION assembly (including FBT)
   AWV1146 (31.0kV, 135V)
3. R CRT DRIVE assembly
   AWZ2957 (10.5kV)
4. G CRT DRIVE assembly
   AWZ2958 (10.5kV)
5. B CRT DRIVE assembly
   AWZ2959 (10.5kV)
6. CRT assembly R
   AWY1090 (31.0kV)
7. CRT assembly G
   AWY1085 (31.0kV)
8. CRT assembly B
   AWY1091 (31.0kV)
9. Focus variable resistor (VR1)
   ACX1025 (10.5kV)
10. Deflection yoke
    ATL1061 (L1 : R)
    ATL1062 (L2 : G) (Approx. 1100V at peak)
    ATL1063 (L3 : B)

■ X-ray protection

- Regarding the parts which are relative to radiation of X-rays (There is the danger to radiate X-ray from the individual CRT assembly R, G, B), there are notifications of caution in the individual schematic diagrams. Be sure to read them for safety's sake.
- The component parts for X-ray protection are as follows: When the current flows to the CRT assembly R, G, B, be sure to perform it with these parts being attached. Protection from the X-ray radiation is maintained in the state in which these parts have been installed to the CRT assembly R, G, B. Accordingly, never supply current only to the CRT assembly R, G, B.
  Moreover, the anode voltage of the CRT assembly R, G, B should always be kept not higher than the predetermined value (in the minimum brightness and picture state when non signal input is higher than 32kV). Be sure to drive the CRT assembly R, G, B by using a completely functional POWER SUPPLY・DEFLECTION assembly (AWV1146) which has been adjusted completely in the combined state. (When the voltage abnormally becomes high, the X-ray protection circuit will operate.)

1. CRT assembly R, G, B (Do not dismantle CRT assemblies under any circumstances).
2. Lens assembly 50 (R), (G), (B)

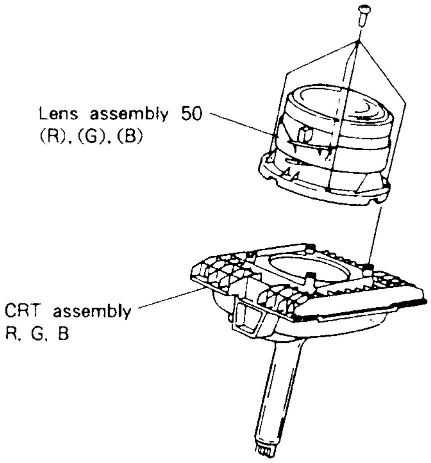


Fig. 3-2 Component parts for X-ray protection

4. HOW TO CLEAN

Note :
Cleaning liquid B4 (GEM1004) for LD players is usable for projection TV display.

Jigs

Use the following for cleaning optical components such as lens, mirror and screen.

Name	Number
Cleaning cloth, MINIMAX	GED-009
Cleaning liquid, B4	GEM1004

Note: Wear gloves when holding optical components lest you should make fingerprints.

4.1 Method of Cleaning Lenses and Mirrors

1. Remove dust with an airbrush.
2. Apply some cleaning liquid to the cloth and wipe the dirt off with the cloth.
3. If the component is not so dirty, moisten it with breath and wipe it with the cloth.

Note: Wipe it softly lest you should scratch the lens.

4.2 Screen Cleaning

1. Apply the cleaning liquid to the above cloth or similar soft cloth and wipe the dirt off. with the cloth.
2. Apply de-electrifier to the rear-surface or fresnel-lens side of the screen, or dust will stick on it.

Note :

(1) Apply no alcoholic liquid such as thinner and benzine to the front surface lest the black printing on the rear surface should come off.

(2) Use Ascetete-cloth tape, GYH1001, for sticking Fresnel lens and lenticular sheet together.

5. EXPLODED VIEWS AND PARTS LIST

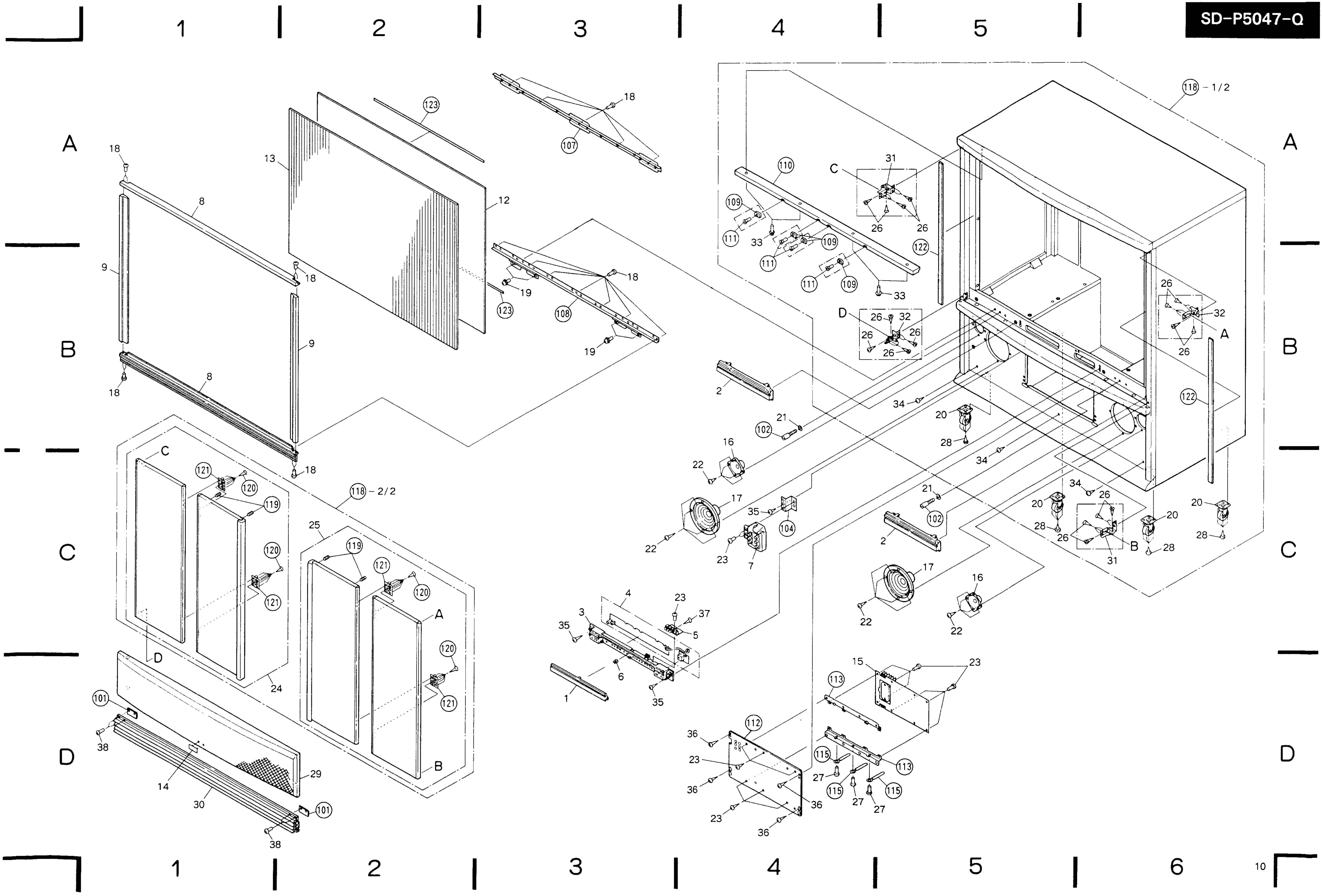
NOTES :
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- Parts marked by ☆ are important parts which use X－rays.
  If any of these parts need to be replaced, always replace with specified parts.

5.1 FRONT VIEW

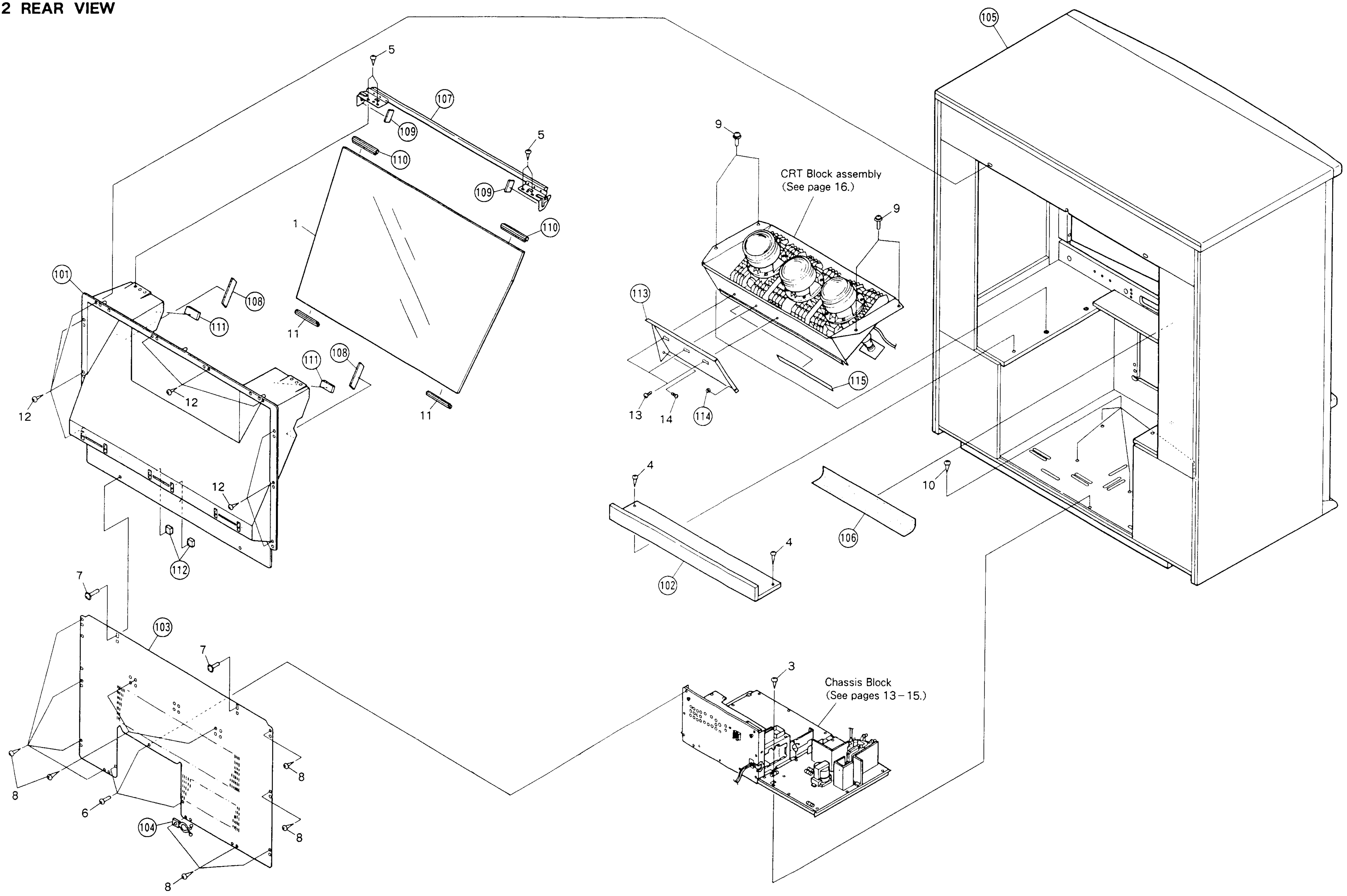
Parts List

Mark	No.	Part No.	Description
	1	AAN1214	Door assembly
	2	AMB1677	Side panel assembly
	3	AMB1675	Front panel assembly
	4	AWZ2967	FRONT CONTROL assembly
	5	AWZ2969	FRONT INPUT TERMINAL assembly
	6	AEC1012	Catcher
⚠	7	ACX1025	Focus variable resistor(VR1)
	8	AAP1118	Screen frame H
	9	AAP1119	Screen frame V
	10		• • • • •
	11		• • • • •
	12	AMR2154	Fresnel lens
	13	AMR2157	Lenticular sheet
	14	AAM1036	Badge
	15	AWZ2964	CONVERGENCE assembly
	16	APT1004	Speaker (High range)
	17	APV1013	Speaker (Mid-low range)
	18	BYC40P200FMC	Screw
	19	ABA1067	Screw
	20	AMR1652	Caster
	21	WA42F120K080	Washer
	22	BYC35P120FZK	Screw
	23	BBZ30P080FZK	Screw
	24	AMM1177	Door L
	25	AMM1178	Door R
	26	ABA1111	Screw
	27	VCZ30P060FMC	Screw
	28	PMB40P200FMC	Screw
	29	AMR2150	Grill R 50
	30	AAP1116	Louver
	31	ANG1462	Hinge A
	32	ANG1463	Hinge B
	33	ABA1108	Screw
	34	ABA1110	Screw
	35	BYC35P120FZB	Screw
	36	BYC35P160FZK	Screw
	37	ABA1011	Screw
	38	BYC40P220FZK	Screw

Mark	No.	Part No.	Description
	101		Louver spacer
	102		Guide pin
	103		• • • • •
	104		VR holder
	105		• • • • •
	106		• • • • •
	107		Holder assembly
	108		Holder assembly
	109		Catch plate
	110		Top front filler
	111		Flat head wood screw ϕ 3.68 × 1/2
	112		Blind plate
	113		Stay
	114		• • • • •
	115		Binder
	116		• • • • •
	117		• • • • •
	118		Cabinet
	119		Magnet catch
	120		Screw
	121		Butterfly hinge
	122		Cushion
	123		Spacer


A
B
C
D
118 - 1/2
C
D
A
B
118 - 2/2
C
A
D
B

5.2 REAR VIEW


CRT Block assembly
(See page 16.)
Chassis Block
(See pages 13 – 15.)

Parts List

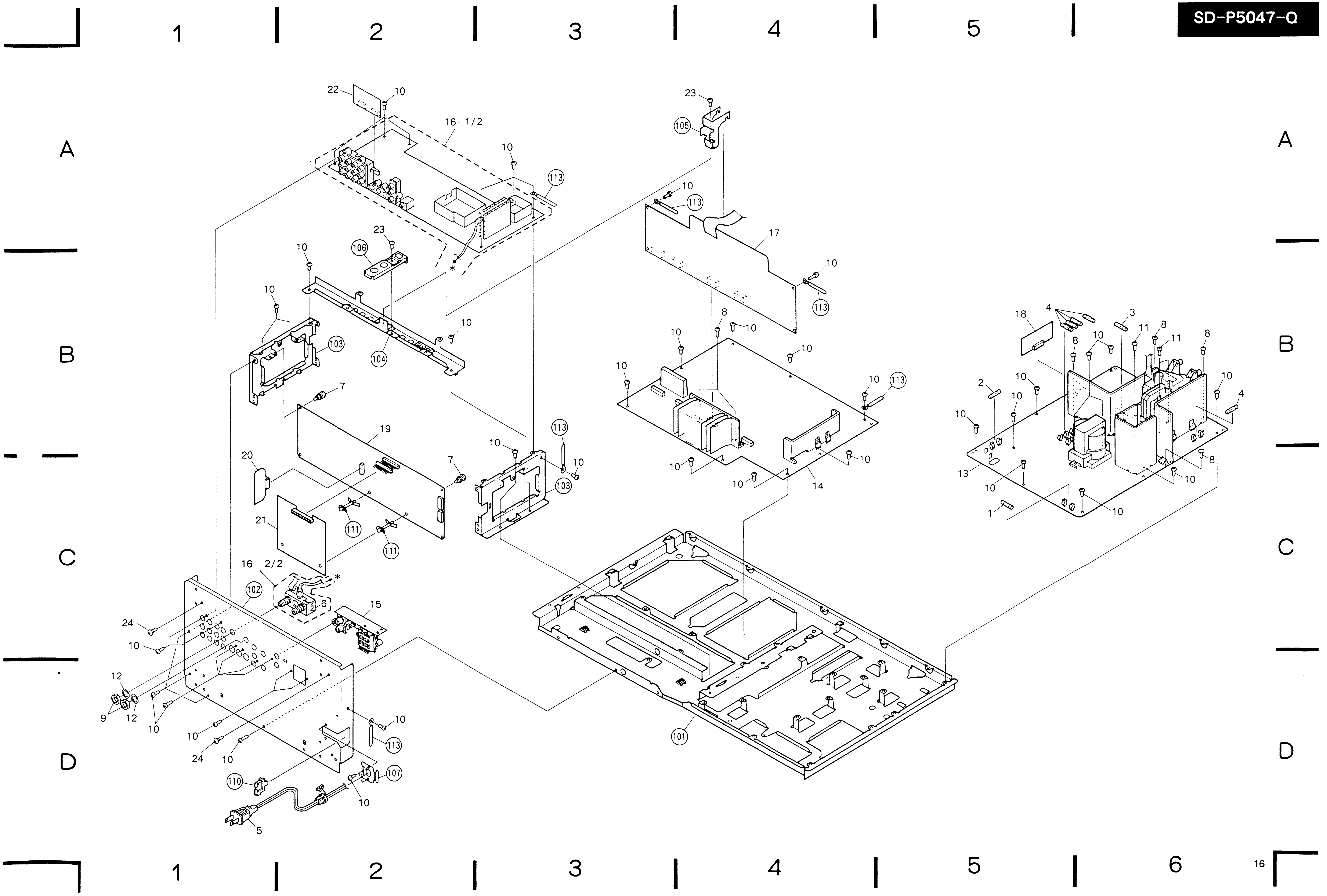
Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1	AMR2173	Mirror		101		Mirror case
	2		• • • • • •		102		Shield plate
	3	BYC35P160FZK	Screw		103		Rear cover
	4	ABA1080	Screw		104		Cable clip
	5	ABA1069	Screw		105		Cabinet
	6	BBZ30P080FZK	Screw		106		Sheet
	7	ABA1005	Screw		107		Mirror holder stay
	8	BYC35P120FZB	Screw		108		Mirror cushion 50
	9	PMB50P180FZB	Screw		109		Mirror supporter cushion
	10	ABA1038	Screw		110		Mirror protector
	11	AAP1122	Mirror protector B		111		Cushion sheet B
	12	BYC35P160FZK	Screw		112		Cushion sheet A
	13	ABA1021	Screw		113		Shield plate
	14	VYC35P120FZB	Screw		114		Washer (vinyl)
					115		Stand cushion

5.3 CHASSIS BLOCK

Parts List

Mark	No.	Part No.	Description
⚠	1	AEK-309	Fuse (6.3A/125V, FU652)
⚠	2	AEK1002	Fuse (8A/125V, FU651)
⚠	3	AEK1012	Fuse (1A/125V, FU551)
⚠	4	AEK1018	Fuse (4A/125V, FU552,FU653 – FU656)
⚠	5	ADG1056	AC power cord
	6	AXF1041	RF switch
	7	AEC-441	Plastic rivet
	8	ABA1099	Screw with bushing
	9	ABN-087	Nut
	10	BBZ30P080FZK	Screw
	11	VBZ30P200FMC	Screw
	12	WAX0F160N100	Washer
☆	13	AWV1146	POWER SUPPLY • DEFLECTION assembly
	14	AWZ2961	VERTICAL • VIDEO • AUDIO assembly
	15	AWZ2962	SP TERMINAL assembly
	16	AWZ2973	AV I/O-3P • TUNER assembly
	17	AWZ2977	MICOM • SURROUND assembly
	18	AWZ2965	SUB DEFLECTION assembly
	19	AWZ2954	PINP assembly
	20	AWZ3025	PINP SUB assembly
	21	AWZ2955	LOGIC assembly
	22	AWZ2956	PINP SELECT assembly
	23	BBZ30P060FMC	Screw
	24	ABA1089	Screw

Mark	No.	Part No.	Description
	101		Chassis
	102		Rear panel
	103		Side frame
	104		Frame
	105		PCB holder A
	106		PCB holder B
	107		Cord plate
	108		• • • • •
	109		• • • • •
	110		Cord holder
	111		PCB support
	112		• • • • •
	113		Binder

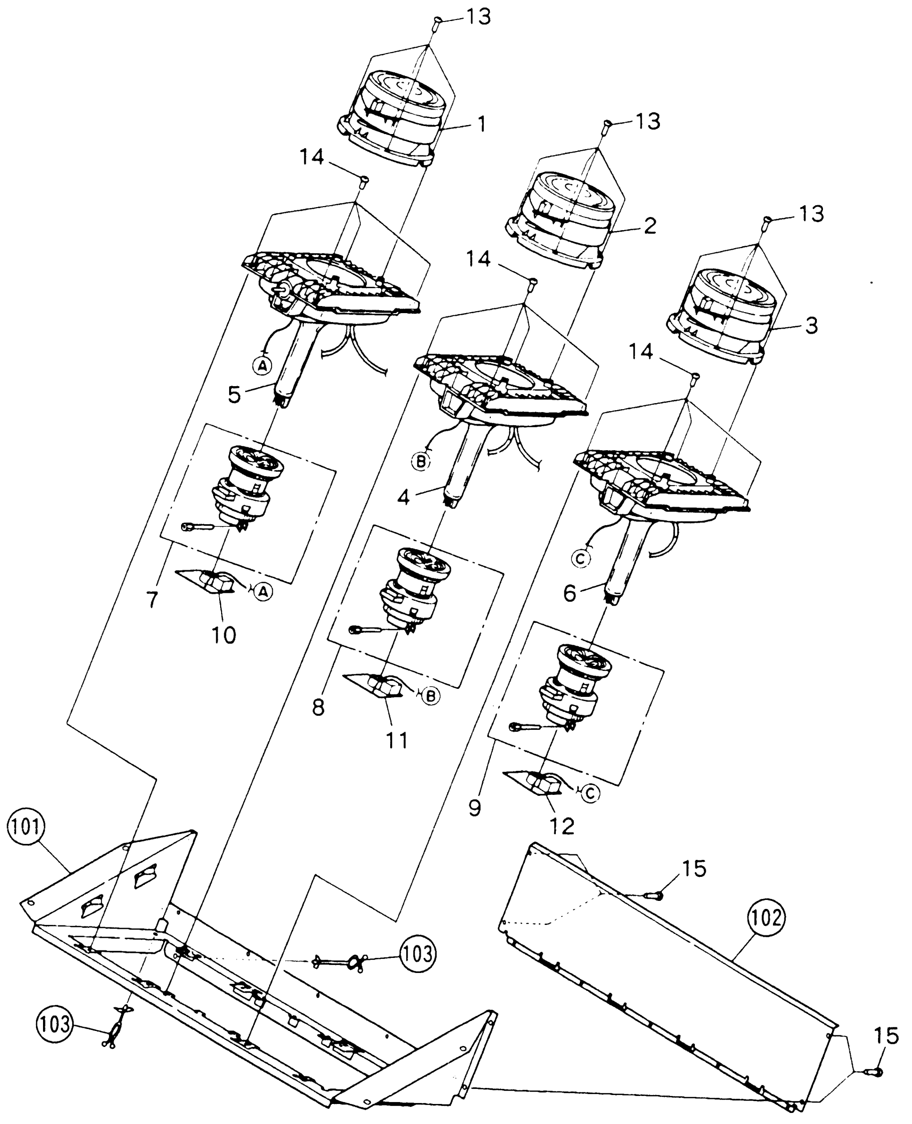

A
B
C
D
16-1/2
(113)
(105)
(113)
(113)
(106)
*
(103)
(104)
(111)
(111)
(113)
(103)
(113)
16-2/2
*
(102)
(113)
(101)
(110)
(107)

5.4 CRT ASSEMBLY BLOCK

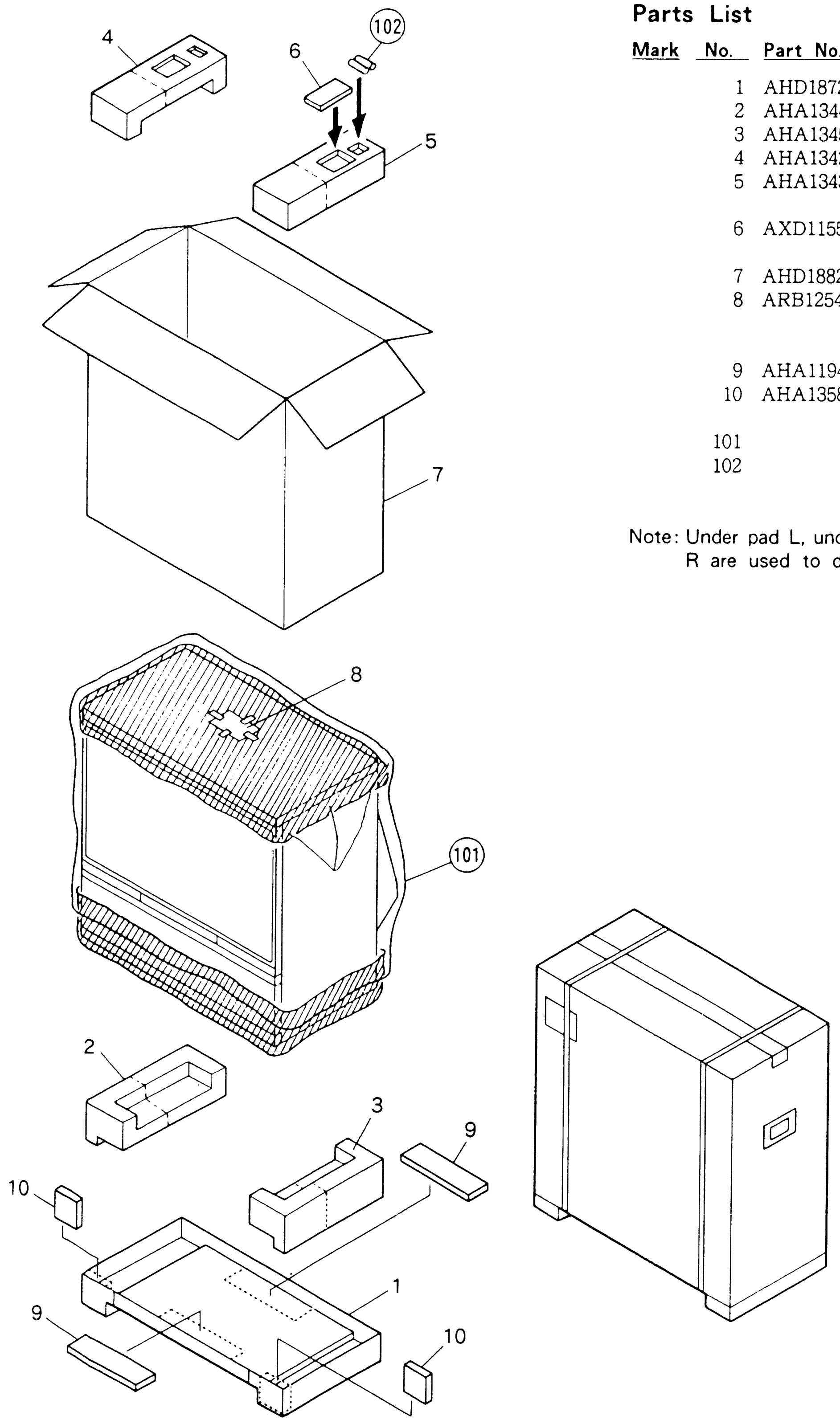
Parts List

Mark	No.	Part No.	Description
☆	1	AMR2163	Lens assembly 50 (R)
☆	2	AMR2164	Lens assembly 50 (G)
☆	3	AMR2165	Lens assembly 50 (B)
☆⚠	4	AWY1085	CRT assembly G
☆⚠	5	AWY1090	CRT assembly R
☆⚠	6	AWY1091	CRT assembly B
⚠	7	ATL1061	Deflection yoke (R) (L1)
⚠	8	ATL1062	Deflection yoke (G) (L2)
⚠	9	ATL1063	Deflection yoke (B) (L3)
	10	AWZ2957	R. CRT assembly
	11	AWZ2958	G. CRT assembly
	12	AWZ2959	B. CRT assembly
	13	AMZ40P080FZK	Screw
	14	FBT40P120FZK	Screw
	15	BBZ30P080FZK	Screw

Mark	No.	Part No.	Description
	101		CRT stand
	102		Cover L
	103		Lead clamper
	104		Cable holder



6. PACKING



Parts List

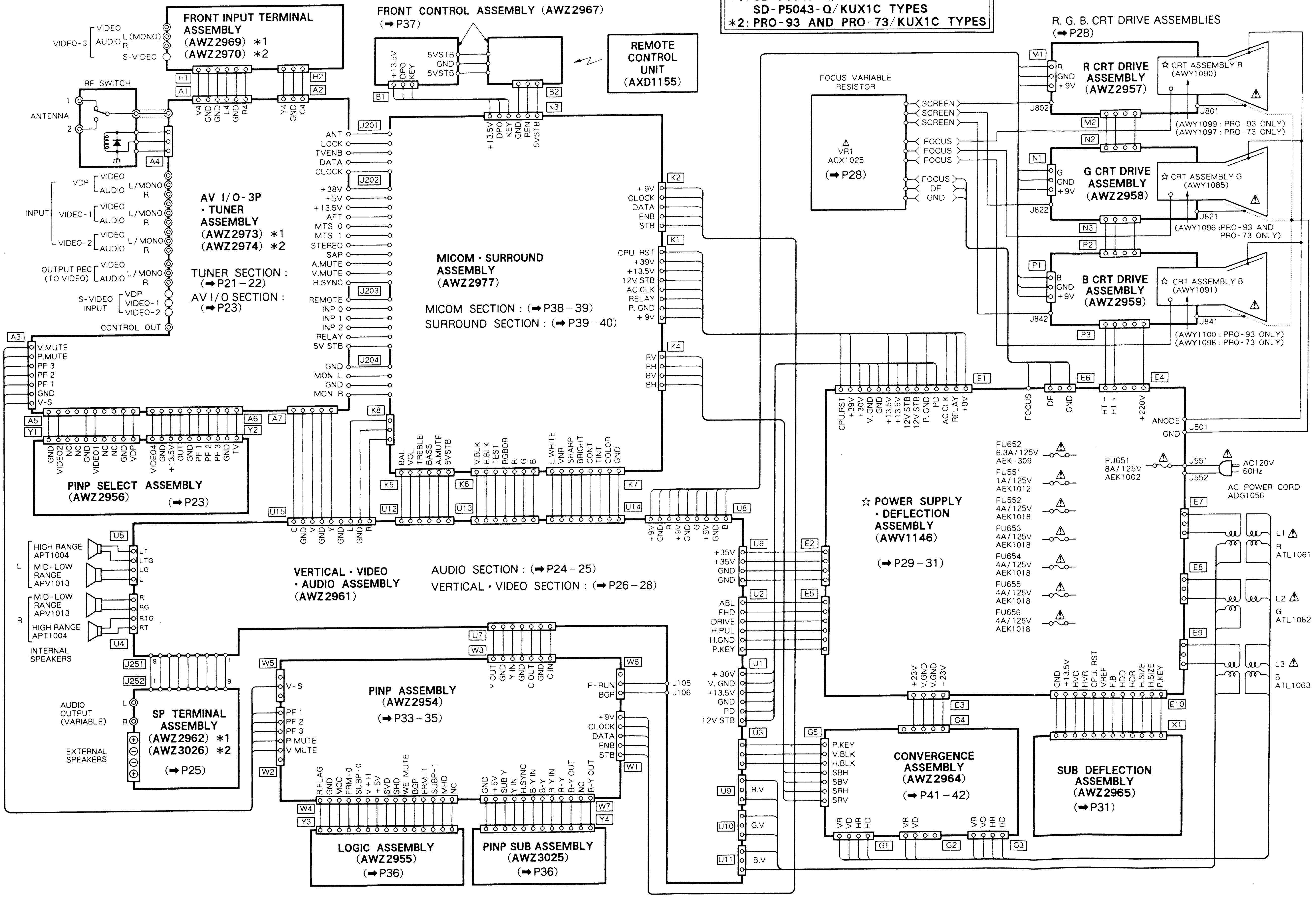
Mark	No.	Part No.	Description
	1	AHD1872	Under carton
	2	AHA1344	Under pad L
	3	AHA1345	Under pad R
	4	AHA1342	Upper pad L
	5	AHA1343	Upper pad R
	6	AXD1155	Remote control unit (CU-SD030)
	7	AHD1882	Upper carton
	8	ARB1254	Operating instructions (English)
	9	AHA1194	Cushion
	10	AHA1358	Cushion
	101		Packing bag
	102		Battery

Note: Under pad L, under pad R, upper pad L and upper pad R are used to divide it.

7. SCHEMATIC AND P.C. BOARDS DIAGRAMS

7.1 OVERALL WIRING DIAGRAM

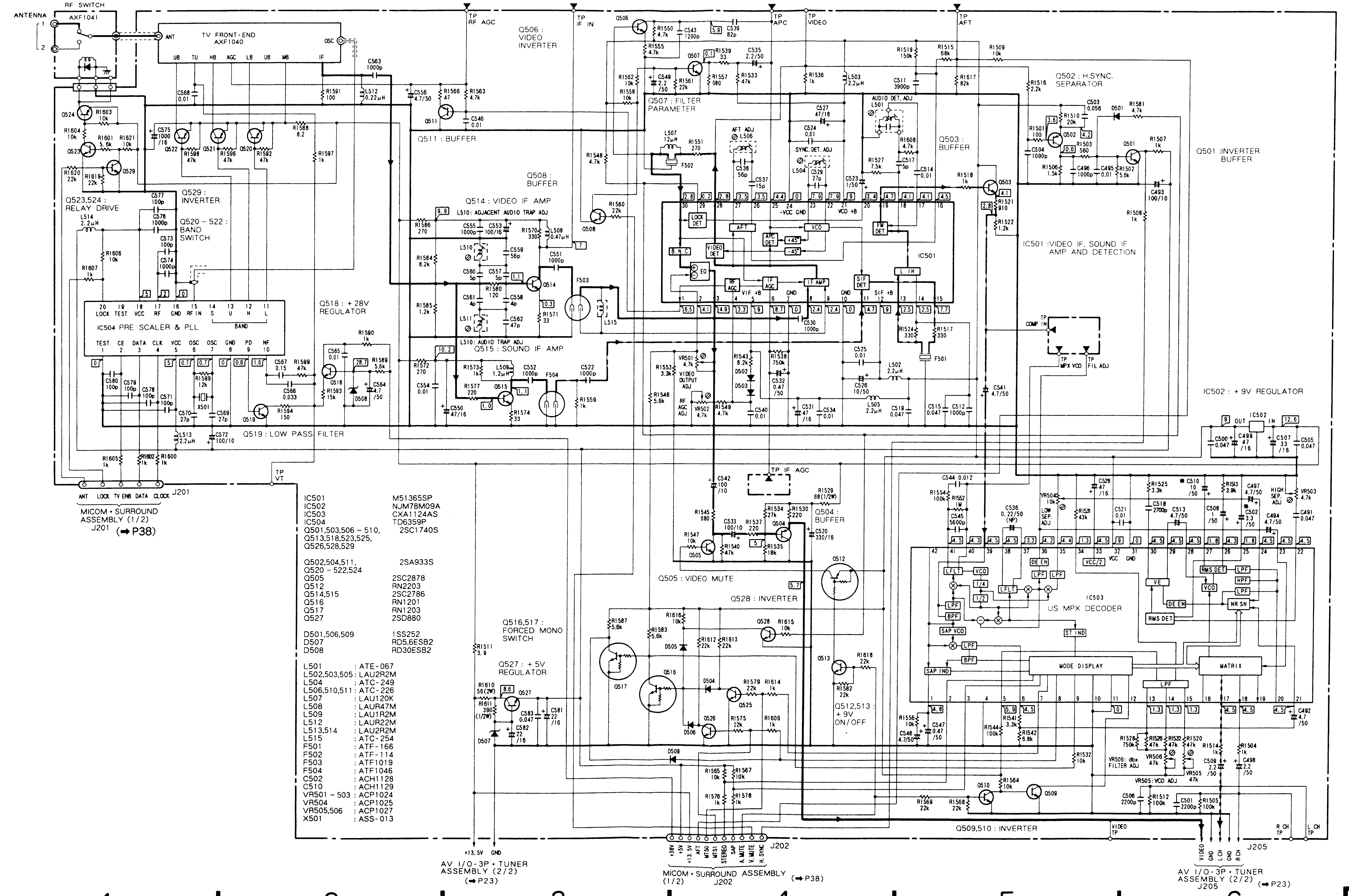
*1: SD-P5047-Q, SD-P5043-K AND SD-P5043-Q/KUX1C TYPES
*2: PRO-93 AND PRO-73/KUX1C TYPES


FRONT INPUT TERMINAL ASSEMBLY (AWZ2969) *1 (AWZ2970) *2
VIDEO-3
VIDEO
AUDIO L (MONO) R
S-VIDEO
H1
H2
A1
A2
V4 GND GND L4 GND R4
Y4 GND C4
FRONT CONTROL ASSEMBLY (AWZ2967) (➡P37)
+13.5V DPO KEY
5VSTB GND 5VSTB
B1
B2
K3
REMOTE CONTROL UNIT (AXD1155)
RF SWITCH
ANTENNA
A4
INPUT
VDP
VIDEO-1
VIDEO-2
VIDEO
AUDIO L/MONO R
OUTPUT REC (TO VIDEO)
S-VIDEO INPUT
VDP VIDEO-1 VIDEO-2
CONTROL OUT
AV I/O-3P · TUNER ASSEMBLY (AWZ2973) *1 (AWZ2974) *2
TUNER SECTION : (➡P21-22)
AV I/O SECTION : (➡P23)
J201
ANT LOCK TVENB DATA CLOCK
J202
+38V +5V +13.5V AFT MTS 0 MTS 1 STEREO SAP A.MUTE V.MUTE H.SYNC
J203
REMOTE INP 0 INP 1 INP 2 RELAY 5V STB
J204
GND MON L GND MON R
+13.5V DPO KEY GND REN 5VSTB
MICOM · SURROUND ASSEMBLY (AWZ2977)
MICOM SECTION : (➡P38-39)
SURROUND SECTION : (➡P39-40)
K2
+9V CLOCK DATA ENB STB
K1
CPU RST +39V +13.5V 12V STB AC CLK RELAY P. GND +9V
K4
RV RH BV BH
A3
V.MUTE P.MUTE PF 3 PF 2 PF 1 GND V-S
A5 Y1 A6 Y2 A7
GND VIDEO2 NC NC GND VIDEO1 NC NC GND VDP VIDEO4 GND +13.5V OUT GND PF 1 PF 2 PF 3 GND TV
PINP SELECT ASSEMBLY (AWZ2956) (➡P23)
K8
BAL VOL TREBLE BASS A.MUTE 5VSTB
V.BLK H.BLK TEST RGBOR R G B
L.WHITE VNR SHARP BRIGHT CONT TINT COLOR GND
K5 K6 K7
U15 U12 U13 U14 U8
C GND V GND Y GND L GND R
+9V GND R +9V GND G +9V GND B
U5
HIGH RANGE APT1004
MID-LOW RANGE APV1013
L
R
LT LTG LG L R RG RTG RT
U4
INTERNAL SPEAKERS
VERTICAL · VIDEO · AUDIO ASSEMBLY (AWZ2961)
AUDIO SECTION : (➡P24-25)
VERTICAL · VIDEO SECTION : (➡P26-28)
U6
+35V +35V GND GND
U2
ABL FHD DRIVE H.PUL H.GND P.KEY
U1
+30V V. GND +13.5V GND PD 12V STB
U3
U9 R.V
U10 G.V
U11 B.V
J251 J252
AUDIO OUTPUT (VARIABLE)
EXTERNAL SPEAKERS
SP TERMINAL ASSEMBLY (AWZ2962) *1 (AWZ3026) *2 (➡P25)
U7 W3
Y OUT GND Y IN GND C OUT GND C IN
W5
V-S
PF 1 PF 2 PF 3 P MUTE V MUTE
W2
PINP ASSEMBLY (AWZ2954) (➡P33-35)
W6
F-RUN BGP
J105 J106
+9V CLOCK DATA ENB STB
W1
R.FLAG GND MCC FRM-0 SUBP-0 V+H +5V SVD SHD WE MUTE BGP FRM-1 SUBP-1 MHD NC
GND +5V SUB Y Y IN H.SYNC B-Y IN B-Y R-Y IN R-Y B-Y OUT NC R-Y OUT
W4 Y3 W7 Y4
LOGIC ASSEMBLY (AWZ2955) (➡P36)
PINP SUB ASSEMBLY (AWZ3025) (➡P36)
FOCUS VARIABLE RESISTOR
VR1 ACX1025 (➡P28)
SCREEN SCREEN SCREEN
FOCUS FOCUS FOCUS
FOCUS DF GND
R. G. B. CRT DRIVE ASSEMBLIES (➡P28)
M1 R GND +9V
R CRT DRIVE ASSEMBLY (AWZ2957)
☆ CRT ASSEMBLY R (AWY1090)
J802 J801 M2
(AWY1099 : PRO-93 ONLY) (AWY1097 : PRO-73 ONLY)
N2 N1 G GND +9V
G CRT DRIVE ASSEMBLY (AWZ2958)
☆ CRT ASSEMBLY G (AWY1085)
J822 J821 N3
(AWY1096 :PRO-93 AND PRO-73 ONLY)
P2 P1 B GND +9V
B CRT DRIVE ASSEMBLY (AWZ2959)
☆ CRT ASSEMBLY B (AWY1091)
J842 J841 P3
(AWY1100 : PRO-93 ONLY) (AWY1098 : PRO-73 ONLY)
E1
CPU.RST +39V +30V V. GND +5V +13.5V +13.5V 12V STB 12V STB P. GND PD AC CLK RELAY +9V
FOCUS DF GND E6
HT - HT + +220V E4
ANODE GND J501
☆ POWER SUPPLY · DEFLECTION ASSEMBLY (AWV1146) (➡P29-31)
FU652 6.3A/125V AEK-309
FU551 1A/125V AEK1012
FU552 4A/125V AEK1018
FU653 4A/125V AEK1018
FU654 4A/125V AEK1018
FU655 4A/125V AEK1018
FU656 4A/125V AEK1018
FU651 8A/125V AEK1002
J551 J552
AC120V 60Hz
AC POWER CORD ADG1056
E2 E5 E7 E8 E9
L1 R ATL1061
L2 G ATL1062
L3 B ATL1063
+23V V.GND V.GND -23V E3 G4
GND +13.5V HVD HVR CPU. RST VREF F.B HDD HDR H.SIZE H.SIZE P.KEY E10 X1
G5
P.KEY V.BLK H.BLK SBH SBV SRH SRV
CONVERGENCE ASSEMBLY (AWZ2964) (➡P41-42)
VR VD HR HD G1
VR VD G2
VR VD HR HD G3
SUB DEFLECTION ASSEMBLY (AWZ2965) (➡P31)

7.2 AV I/O-3P · TUNER ASSEMBLY (1/2 : TUNER SECTION)

AV I/O-3P · TUNER ASSEMBLY (1/2) (AWZ2973 : SD-P5047-Q, SD-P5043-K AND SD-P5043-Q/KUX1C TYPES)
(AWZ2974 : PRO-93 AND PRO-73/KUX1C TYPES)

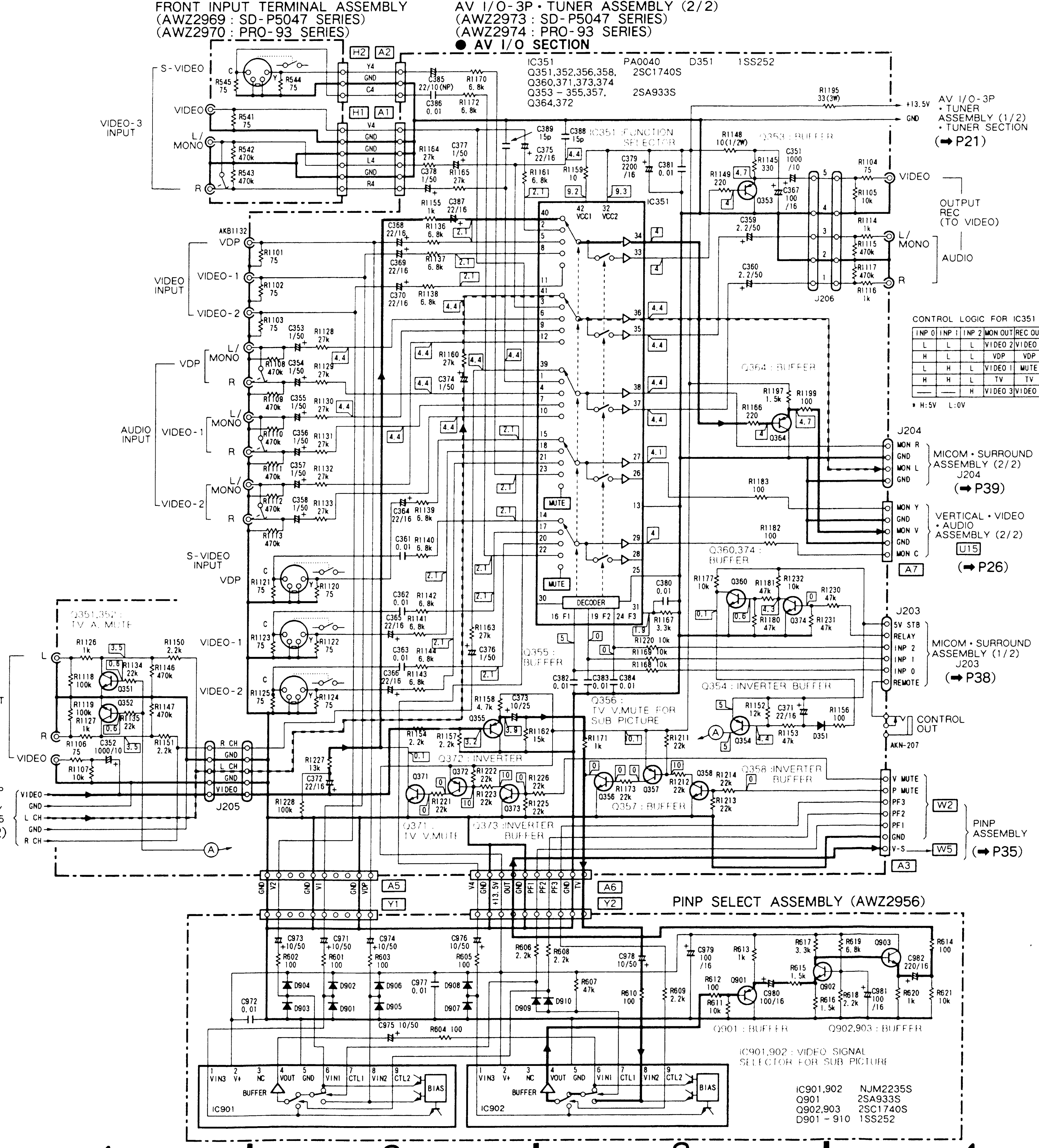
● **TUNER SECTION**


ANTENNA
RF SWITCH AXF1041
TV FRONT-END AXF1040
TP RF AGC
TP IF IN
TP APC
TP VIDEO
TP AFT
Q506 : VIDEO INVERTER
Q511 : BUFFER
Q507 : FILTER PARAMETER
Q508 : BUFFER
Q514 : VIDEO IF AMP
L510: ADJACENT AUDIO TRAP ADJ
L510: AUDIO TRAP ADJ
Q515 : SOUND IF AMP
AFT ADJ
SYNC. DET. ADJ
AUDIO DET. ADJ
Q503 : BUFFER
Q502 : H.SYNC. SEPARATOR
Q501 : INVERTER BUFFER
IC501 : VIDEO IF, SOUND IF AMP AND DETECTION
IC502 : +9V REGULATOR
Q523,524 : RELAY DRIVE
Q529 : INVERTER
Q520 - 522 : BAND SWITCH
IC504 PRE SCALER & PLL
Q518 : +28V REGULATOR
Q519 : LOW PASS FILTER
TP VT
J201
ANT LOCK TV ENB DATA CLOCK
MICOM · SURROUND ASSEMBLY (1/2) J201 (➡P38)
VIDEO OUTPUT ADJ
RF AGC ADJ
TP IF AGC
TP COMP IN
TP MPX VCO
TP FIL ADJ
Q504 : BUFFER
Q505 : VIDEO MUTE
Q528 : INVERTER
Q512,513 : +9V ON/OFF
Q516,517 : FORCED MONO SWITCH
Q527 : +5V REGULATOR
IC503 US MPX DECODER
MODE DISPLAY
MATRIX
LOW SEP. ADJ
HIGH SEP. ADJ
VR506: dbx FILTER ADJ
VR505: VCO ADJ
Q509,510 : INVERTER
+13.5V GND
AV I/O-3P · TUNER ASSEMBLY (2/2) (➡P23)
+28V +5V +13.5V AFT MTS0 MTS1 STEREO SAP A.MUTE V.MUTE H.SYNC
J202
MICOM · SURROUND ASSEMBLY (1/2) J202 (➡P38)
VIDEO TP
R CH TP
L CH TP
VIDEO GND LCH GND RCH
J205
AV I/O-3P · TUNER ASSEMBLY (2/2) J205 (➡P23)
1 2 3 4 5 6
A B C D

IC501	M51365SP
IC502	NJM78M09A
IC503	CXA1124AS
IC504	TD6359P
Q501,503,506 – 510, Q513,518,523,525, Q526,528,529	2SC1740S
Q502,504,511, Q520 – 522,524	2SA933S
Q505	2SC2878
Q512	RN2203
Q514,515	2SC2786
Q516	RN1201
Q517	RN1203
Q527	2SD880
D501,506,509	1SS252
D507	RD5.6ESB2
D508	RD30ESB2

L501 : ATE-067
L502,503,505 : LAU2R2M
L504 : ATC-249
L506,510,511 : ATC-226
L507 : LAU120K
L508 : LAUR47M
L509 : LAU1R2M
L512 : LAUR22M
L513,514 : LAU2R2M
L515 : ATC-254
F501 : ATF-166
F502 : ATF-114
F503 : ATF1019
F504 : ATF1046
C502 : ACH1128
C510 : ACH1129
VR501 – 503 : ACP1024
VR504 : ACP1025
VR505,506 : ACP1027
X501 : ASS-013

7.3 AV I/O-3P · TUNER ASSEMBLY (2/2 : AV I/O SECTION), VERTICAL · VIDEO AUDIO ASSEMBLY (1/2 : AUDIO SECTION), FRONT INPUT TERMINAL, PINP SELECT AND SP TERMINAL ASSEMBLIES


FRONT INPUT TERMINAL ASSEMBLY
(AWZ2969 : SD-P5047 SERIES)
(AWZ2970 : PRO-93 SERIES)
AV I/O-3P · TUNER ASSEMBLY (2/2)
(AWZ2973 : SD-P5047 SERIES)
(AWZ2974 : PRO-93 SERIES)
● AV I/O SECTION
IC351 PA0040
Q351,352,356,358, Q360,371,373,374 2SC1740S
Q353 - 355,357, Q364,372 2SA933S
D351 1SS252
IC351 : FUNCTION SELECTOR
Q353 : BUFFER
Q364 : BUFFER
Q360,374 : BUFFER
Q354 : INVERTER BUFFER
Q355 : BUFFER
Q356 : TV V.MUTE FOR SUB PICTURE
Q372 : INVERTER
Q371 : TV V.MUTE
Q373 : INVERTER BUFFER
Q357 : BUFFER
Q358 : INVERTER BUFFER
Q351,352 : TV A. MUTE
DECODER
S-VIDEO
VIDEO
L/MONO
R
VIDEO-3 INPUT
VDP
VIDEO-1
VIDEO-2
VIDEO INPUT
AUDIO INPUT
S-VIDEO INPUT
TV OUT
AV I/O-3P · TUNER ASSEMBLY (1/2) · TUNER SECTION (➡ P21)
OUTPUT REC (TO VIDEO)
AUDIO
J206
J204
MICOM · SURROUND ASSEMBLY (2/2) J204 (➡ P39)
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2) U15 (➡ P26)
A7
J203
MICOM · SURROUND ASSEMBLY (1/2) J203 (➡ P38)
CONTROL OUT
AKN-207
AKB1132
PINP ASSEMBLY W2 W5 (➡ P35)
A3
AV I/O-3P · TUNER ASSEMBLY (1/2) J205 (➡ P22)
J205
A5 Y1 A6 Y2
PINP SELECT ASSEMBLY (AWZ2956)
IC901,902 : VIDEO SIGNAL SELECTOR FOR SUB PICTURE
Q901 : BUFFER
Q902,903 : BUFFER
IC901
IC902
BUFFER
BIAS
IC901,902 NJM2235S
Q901 2SA933S
Q902,903 2SC1740S
D901 - 910 1SS252

CONTROL LOGIC FOR IC351 (PA0040)

INP 0	INP 1	INP 2	MON OUT	REC OUT	S-MON OUT
L	L	L	VIDEO 2	VIDEO 2	S-VIDEO 2
H	L	L	VDP	VDP	S-VDP
L	H	L	VIDEO 1	MUTE	S-VIDEO 1
H	H	L	TV	TV	———
——	——	H	VIDEO 3	VIDEO 3	S-VIDEO 3

* H:5V L:0V

1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

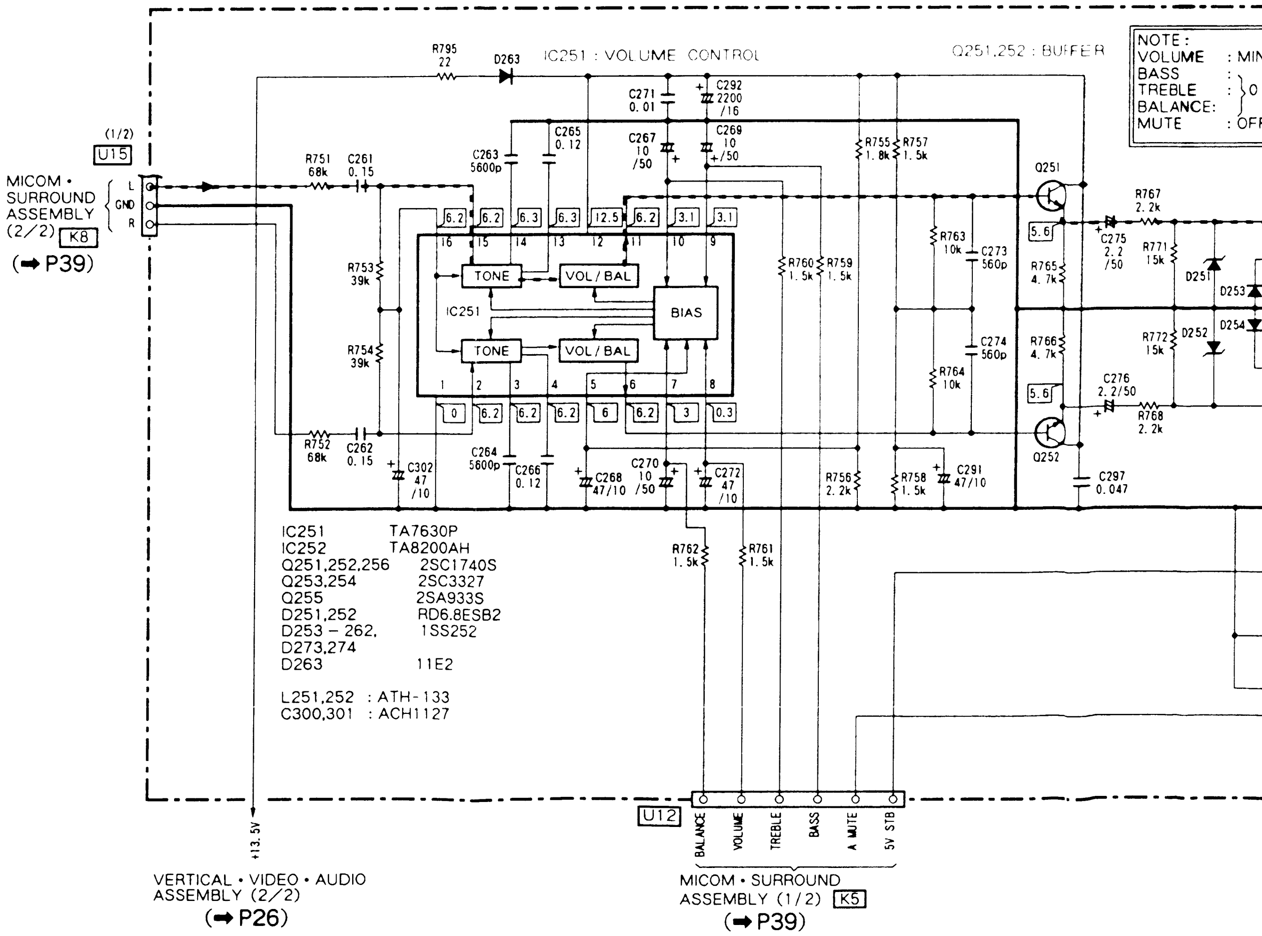
3. VOLTAGE, CURRENT :
▭ ; DC voltage (V) at no input signal without notice.
Value in ( ) is color bar signal input state.
⇦mA ; DC current at no input signal without notice.

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K AND SD-P5043-Q TYPES
PRO-93 SERIES :PRO-93 AND PRO-73 TYPES

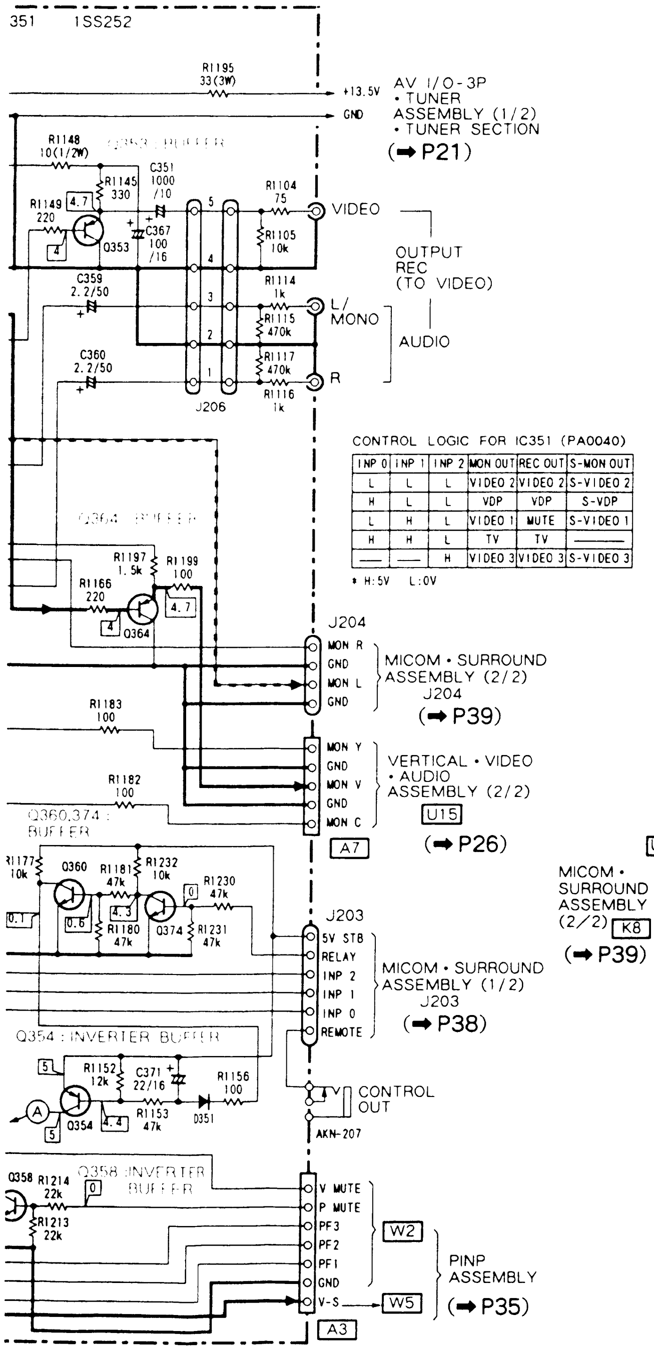
4. OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point.
- The ⚠ mark found on some component parts importance of the safety factor of the part. T replacing, be sure to use parts of identical de
- ※ marked capacitors and resistors have parts
- Parts marked by ☆ are important parts which any of these parts need to be replaced, alway specified parts.
- Parts marked by × are important parts which a failure occurs in any of these parts, replac circuit board assembly where the relevant pa been adjusted as a working component. Do n actual part itself.
If any part marked by × is replaced, there is d exposed to X-rays.

This is the basic schematic diagram, but the may vary due to improvements in design.

VERTICAL · VIDEO · AUDIO ASSEMBLY (1/2) (AWZ2961)
● AUDIO SECTION


IC251 : VOLUME CONTROL
Q251,252 : BUFFER
NOTE :
VOLUME : MIN
BASS
TREBLE
BALANCE :
MUTE : OFF
MICOM · SURROUND ASSEMBLY (2/2) K8 (➡ P39)
U15
TONE
VOL/BAL
BIAS
IC251
IC251 TA7630P
IC252 TA8200AH
Q251,252,256 2SC1740S
Q253,254 2SC3327
Q255 2SA933S
D251,252 RD6.8ESB2
D253 - 262, D273,274 1SS252
D263 11E2
L251,252 : ATH-133
C300,301 : ACH1127
U12
BALANCE
VOLUME
TREBLE
BASS
A MUTE
5V STB
+13.5V
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2) (➡ P26)
MICOM · SURROUND ASSEMBLY (1/2) K5 (➡ P39)

· VIDEO AUDIO ASSEMBLY
) SP TERMINAL ASSEMBLIES
/2)

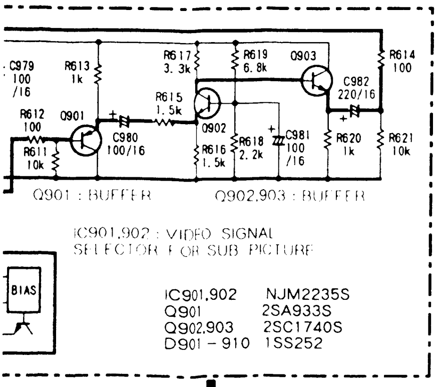

351 1SS252
R1195 33(3W)
+13.5V
GND
AV I/O-3P • TUNER ASSEMBLY (1/2) • TUNER SECTION
(➡ P21)
R1148 10(1/2W)
Q353 BUFFER
R1145 330
C351 1000 /10
R1104 75
R1149 220
C367 100 /16
Q353
R1105 10k
VIDEO
OUTPUT REC (TO VIDEO)
C359 2.2/50
R1114 1k
L/ MONO
R1115 470k
AUDIO
C360 2.2/50
R1117 470k
R1116 1k
R
J206
Q364 BUFFER
R1197 1.5k
R1199 100
R1166 220
Q364
J204
MON R
GND
MON L
GND
MICOM • SURROUND ASSEMBLY (2/2) J204
(➡ P39)
R1183 100
MON Y
GND
MON V
GND
MON C
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
U15
(➡ P26)
A7
R1182 100
Q360,374 : BUFFER
Q360
R1181 47k
R1232 10k
R1230 47k
R1180 47k
Q374
R1231 47k
J203
5V STB
RELAY
INP 2
INP 1
INP 0
REMOTE
MICOM • SURROUND ASSEMBLY (1/2) J203
(➡ P38)
Q354 : INVERTER BUFFER
R1152 12k
C371 22/16
R1156 100
R1153 47k
D351
Q354
CONTROL OUT
AKN-207
Q358 INVERTER BUFFER
R1214 22k
R1213 22k
V MUTE
P MUTE
PF3
PF2
PF1
GND
V-S
W2
W5
PINP ASSEMBLY
(➡ P35)
A3

CONTROL LOGIC FOR IC351 (PA0040)

INP 0	INP 1	INP 2	MON OUT	REC OUT	S-MON OUT
L	L	L	VIDEO 2	VIDEO 2	S-VIDEO 2
H	L	L	VDP	VDP	S-VDP
L	H	L	VIDEO 1	MUTE	S-VIDEO 1
H	H	L	TV	TV	———
——	——	H	VIDEO 3	VIDEO 3	S-VIDEO 3

* H:5V L:0V

P SELECT ASSEMBLY (AWZ2956)


C979 100 /16
R613 1k
R617 3.3k
R619 6.8k
Q903
R614 100
C982 220/16
R615 1.5k
R612 100
Q901
Q902
C980 100/16
R611 10k
R616 1.5k
R618 2.2k
C981 100 /16
R620 1k
R621 10k
Q901 : BUFFER
Q902,903 : BUFFER
IC901,902 : VIDEO SIGNAL SELECTOR FOR SUB PICTURE
BIAS

IC901,902	NJM2235S
Q901	2SA933S
Q902,903	2SC1740S
D901 - 910	1SS252

1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT :
▭ ; DC voltage (V) at no input signal without notice.
Value in ( ) is color bar signal input state.
⇦mA ; DC current at no input signal without notice.

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K AND SD-P5043-Q TYPES
PRO-93 SERIES :PRO-93 AND PRO-73 TYPES

4. OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point.

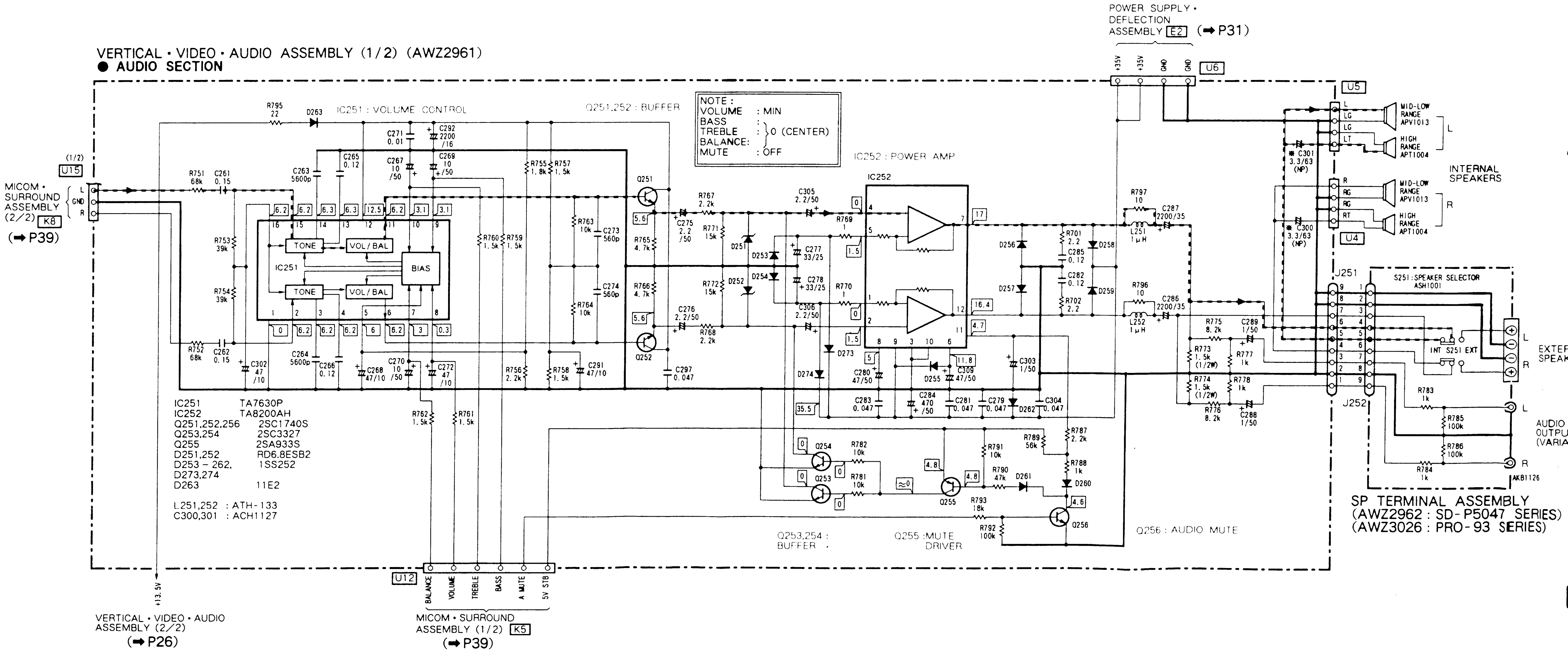
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- ※ marked capacitors and resistors have parts numbers.
- Parts marked by ☆ are important parts which use X-rays. If any of these parts need to be replaced, always replace with specified parts.
- Parts marked by × are important parts which use X-rays. If a failure occurs in any of these parts, replace the printed circuit board assembly where the relevant part has already been adjusted as a working component. Do not replace the actual part itself.
If any part marked by × is replaced, there is danger of being exposed to X-rays.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SIGNAL ROUTES
CHARGED SECTION
——— (VIDEO SIGNAL ROUTE
Y SIGNAL
COLOR SIGNAL ROUTE
AUDIO IF ROUTE
— — — AUDIO L CH ROUTE
- - - - COMPONENT SIGNAL ROUTE
- - - - H. DEFLECTION ROUTE
V. DEFLECTION ROUTE
R. SIGNAL ROUTE
G. SIGNAL ROUTE
B. SIGNAL ROUTE

6. SWITCHES : (The underlined indicates the switch position)
SP TERMINAL ASSEMBLY
S251 : SPEAKER SELECTOR INT - EXT
FRONT CONTROL ASSEMBLY
S861 : POWER
S862 : PINP ON/OFF
S863 : SELECT/ADJUST −
S864 : STD/AV MEM
S865 : CHANNEL +
S866 : ANTENNA
S867 : PINP INPUT
S868 : SELECT/ADJUST +
S869 : DPO
S870 : VOLUME −
S871 : INPUT SELECTOR
S872 : PRESET MENU ON/OFF
S873 : SET
S874 : FACTORY ADJ
S875 : VOLUME +
S876 : CHANNEL −

VERTICAL • VIDEO • AUDIO ASSEMBLY (1/2) (AWZ2961)
● AUDIO SECTION


POWER SUPPLY • DEFLECTION ASSEMBLY E2 (➡ P31)
+35V
+35V
GND
GND
U6
U5
U4
(1/2)
U15
MICOM • SURROUND ASSEMBLY (2/2) K8
(➡ P39)
L
GND
R
R795 22
D263
IC251 : VOLUME CONTROL
Q251,252 : BUFFER
C271 0.01
C292 2200 /16
C265 0.12
C267 10 /50
C269 10 /50
C263 5600p
R751 68k
C261 0.15
R755 1.8k
R757 1.5k
TONE
VOL/BAL
BIAS
IC251
R753 39k
R754 39k
R760 1.5k
R759 1.5k
R763 10k
C273 560p
R764 10k
C274 560p
R765 4.7k
R766 4.7k
Q251
Q252
R752 68k
C262 0.15
C302 47 /10
C264 5600p
C266 0.12
C268 47/10
C270 10 /50
C272 47 /10
R756 2.2k
R758 1.5k
C291 47/10
R762 1.5k
R761 1.5k
NOTE :
VOLUME : MIN
BASS :
TREBLE : 0 (CENTER)
BALANCE:
MUTE : OFF
IC252 : POWER AMP
IC252
R767 2.2k
C275 2.2 /50
R771 15k
D251
D253
D254
D252
R772 15k
C277 33/25
C278 33/25
C305 2.2/50
R769 1
R770 1
C276 2.2/50
R768 2.2k
C306 2.2/50
D273
D274
C280 47/50
D255
C309 47/50
C283 0.047
C284 470 /50
C281 0.047
C279 0.047
D262
C304 0.047
C303 1/50
C297 0.047
D256
D257
D258
D259
R701 2.2
C285 0.12
C282 0.12
R702 2.2
R797 10
L251 1μH
C287 2200/35
R796 10
L252 1μH
C286 2200/35
※ C301 3.3/63 (NP)
※ C300 3.3/63 (NP)
R775 8.2k
C289 1/50
R773 1.5k (1/2W)
R777 1k
R774 1.5k (1/2W)
R778 1k
R776 8.2k
C288 1/50
Q254
Q253
R782 10k
R781 10k
Q253,254 : BUFFER
R791 10k
R790 47k
D261
Q255
Q255 : MUTE DRIVER
R789 56k
R787 2.2k
R788 1k
D260
R793 18k
R792 100k
Q256
Q256 : AUDIO MUTE
U12
BALANCE
VOLUME
TREBLE
BASS
A MUTE
5V STB
+13.5V
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
(➡ P26)
MICOM • SURROUND ASSEMBLY (1/2) K5
(➡ P39)
L
LG
LG
LT
R
RG
RG
RT
MID-LOW RANGE APV1013
HIGH RANGE APT1004
INTERNAL SPEAKERS
J251
J252
S251 : SPEAKER SELECTOR ASH1001
INT S251 EXT
EXTERNAL SPEAKERS
R783 1k
R785 100k
R786 100k
R784 1k
AUDIO OUTPUT (VARIABLE)
AKB1126
SP TERMINAL ASSEMBLY
(AWZ2962 : SD-P5047 SERIES)
(AWZ3026 : PRO-93 SERIES)

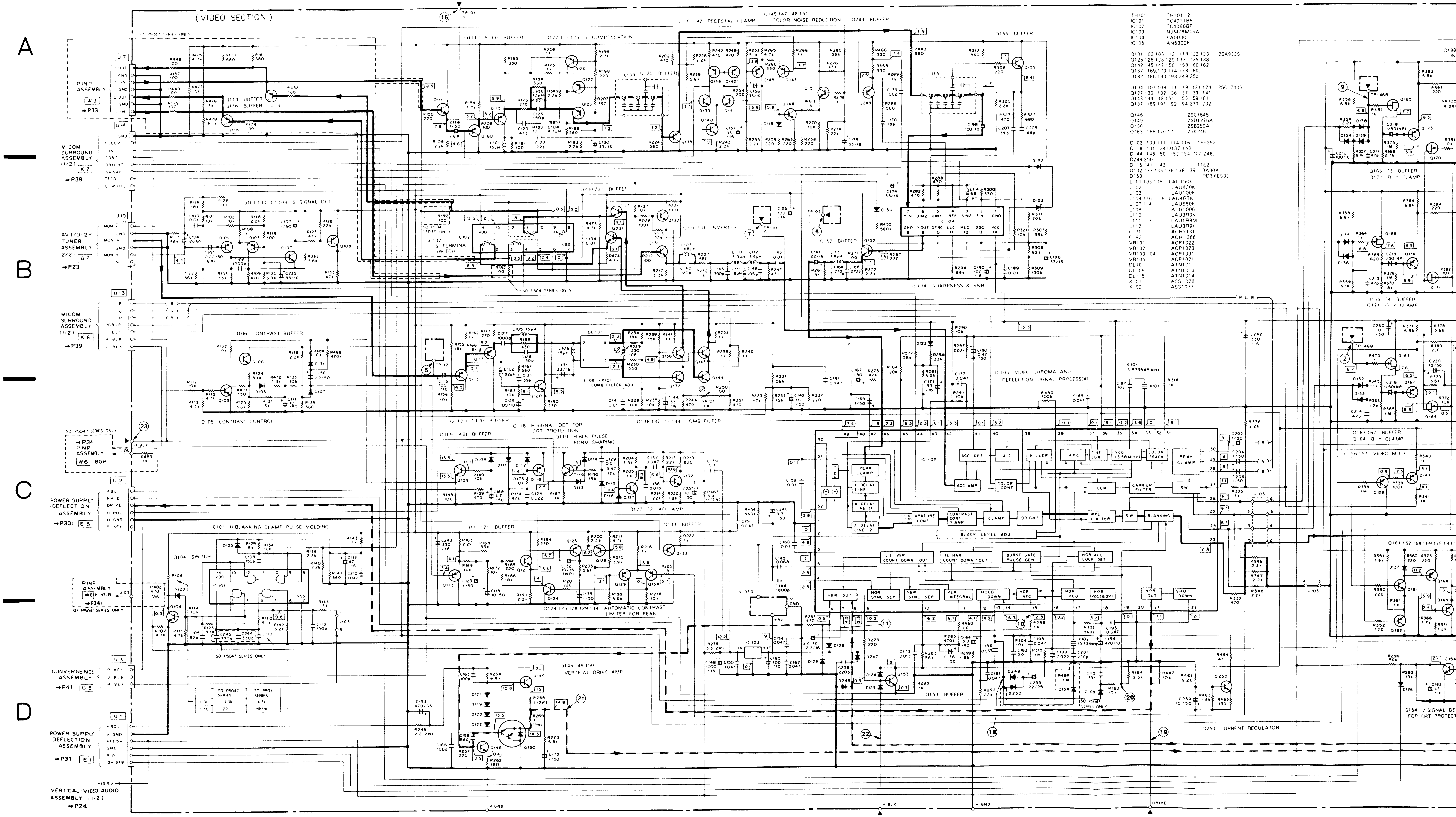
IC251	TA7630P
IC252	TA8200AH
Q251,252,256	2SC1740S
Q253,254	2SC3327
Q255	2SA933S
D251,252	RD6.8ESB2
D253 - 262, D273,274	1SS252
D263	11E2

L251,252 : ATH-133
C300,301 : ACH1127

7.4 VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2 : VIDEO SECTION), R, G AND B CRT DRIVE ASSEMBLIES

VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2) (AWZ2961 : SD-P5047 SERIES)
● VIDEO SECTION (AWZ2960 : SD-P504 SERIES)

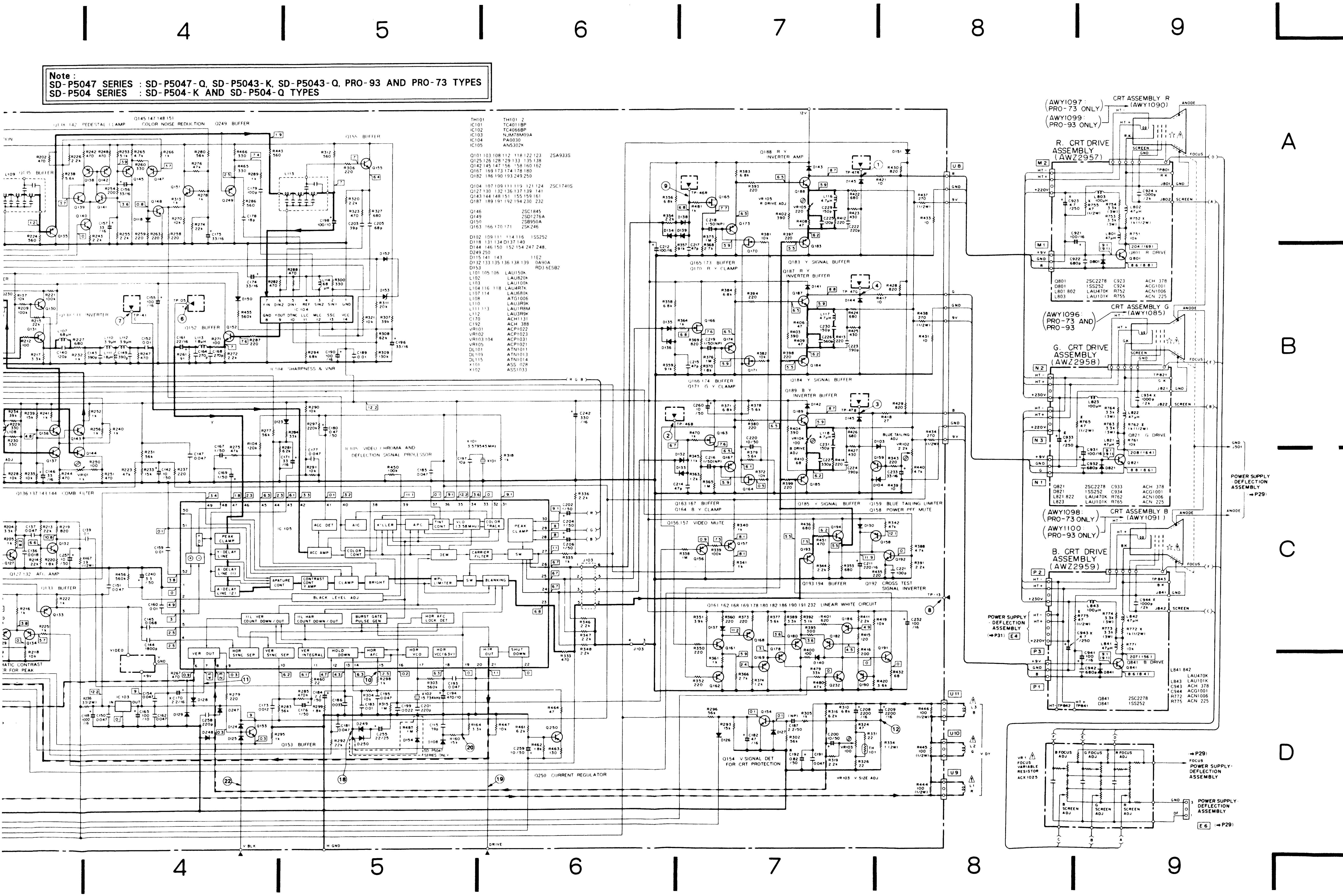
Note :
SD-P5047 SERIES : SD-P5047-Q, SD-P5043-K, SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES : SD-P504-K AND SD-P504-Q TYPES



(VIDEO SECTION)
PINP ASSEMBLY W3 →P33
MICOM SURROUND ASSEMBLY (1/2) K7 →P39
AV I/O-2P, TUNER ASSEMBLY (2/2) A7 →P23
MICOM SURROUND ASSEMBLY (1/2) K6 →P39
SD-P5047 SERIES ONLY
→P34 PINP ASSEMBLY W6 BGP
POWER SUPPLY DEFLECTION ASSEMBLY →P30 E5
PINP ASSEMBLY W6 F RUN →P34
CONVERGENCE ASSEMBLY →P41 G5
POWER SUPPLY DEFLECTION ASSEMBLY →P31 E1
VERTICAL, VIDEO AUDIO ASSEMBLY (1/2) →P24
Q114 BUFFER
Q116 BUFFER
Q111,115,160 BUFFER
Q122,123,126 L COMPENSATION
Q138,142 PEDESTAL CLAMP
Q145,147,148,151 COLOR NOISE REDUCTION
Q249 BUFFER
Q135 BUFFER
Q155 BUFFER
Q101,103,107,108 S SIGNAL DET
IC102 S TERMINAL SWITCH
Q230,231 BUFFER
Q140,141 INVERTER
Q152 BUFFER
IC104 SHARPNESS & VNR
Q106 CONTRAST BUFFER
Q105 CONTRAST CONTROL
DL101 COMB FILTER ADJ
Q136,137,143,144 COMB FILTER
IC105 VIDEO CHROMA AND DEFLECTION SIGNAL PROCESSOR
X101 3.579545 MHz
Q109 ABL BUFFER
Q118 H.SIGNAL DET FOR CRT PROTECTION
Q119 H.BLK PULSE FORM SHAPING
Q127,132 AFC AMP
IC101 H.BLANKING CLAMP PULSE MOLDING
Q104 SWITCH
Q113,121 BUFFER
Q124,125,128,129,134 AUTOMATIC CONTRAST LIMITER FOR PEAK
Q133 BUFFER
Q146,149,150 VERTICAL DRIVE AMP
Q153 BUFFER
Q250 CURRENT REGULATOR
ACC DET
ACC AMP
A/C
KILLER
APC
TINT CONT
VCO (3.58MHz)
COLOR TRACK
PEAK CLAMP
COLOR CONT
DEM
CARRIER FILTER
SW
PEAK CLAMP
Y-DELAY LINE
A DELAY LINE (1)
A-DELAY LINE (2)
APATURE CONT
CONTRAST CONT Y AMP
CLAMP
BRIGHT
WPL LIMITER
BLANKING
BLACK LEVEL ADJ
U/L VER COUNT DOWN/OUT
1H/ HAR COUNT DOWN/OUT
BURST GATE PULSE GEN
HOR AFC LOCK DET
VER OUT
HOR SYNC SEP
VER SYNC SEP
VER INTEGRAL
HOLD DOWN
HOR AFC
HOR VCO
HOR VCO(32fH)
HOR OUT
SHUT DOWN
Q165,171 BUFFER
Q170 R-Y CLAMP
Q166,174 BUFFER
Q171 G-Y CLAMP
Q163,167 BUFFER
Q164 B-Y CLAMP
Q156,157 VIDEO MUTE
Q154 V SIGNAL DET FOR CRT PROTECT
SD-P5047 SERIES ONLY
SD-P504 SERIES ONLY
V GND
V BLK
H GND
DRIVE

TH101	TH101 2
IC101	TC4011BP
IC102	TC4066BP
IC103	NJM78M09A
IC104	PA0030
IC105	AN5302K
Q101 103,108,112 118 122 123 Q125,126 128 129 133 135 138 Q142 145 147 156 158 160 162 Q167 169,173,174 178 180 Q182 186 190 193 249 250	2SA933S
Q104 107 109 111 119 121 124 Q127 130 132 136 137 139 141 Q143,144 148,151 155 159 161 Q187 189 191 192,194 230 232	2SC1740S
Q146	2SC1845
Q149	2SD1276A
Q150	2SB950A
Q163 166 170 171	2SK246
D102 109 111 114 116 D118 131 134 D137 140 D144 146 150 152 154 247,248, D249 250	1SS252
D115 141 143	11E2
D132 133 135 136 138 139	0A90A
D153	RD3.6ESB2
L101 105 106	LAU150K
L102	LAU820K
L103	LAU100K
L104 116 118	LAU4R7K
L107 114	LAU680K
L108	ATG1006
L110	LAU3R9K
L111 113	LAU1R8M
L112	LAU3R9K
C170	ACH1131
C192	ACH 388
VR101	ACP1022
VR102	ACP1023
VR103 104	ACP1031
VR105	ACP1021
DL101	ATN1011
DL109	ATN1013
DL115	ATN1014
X101	ASS 028
X102	ASS1033

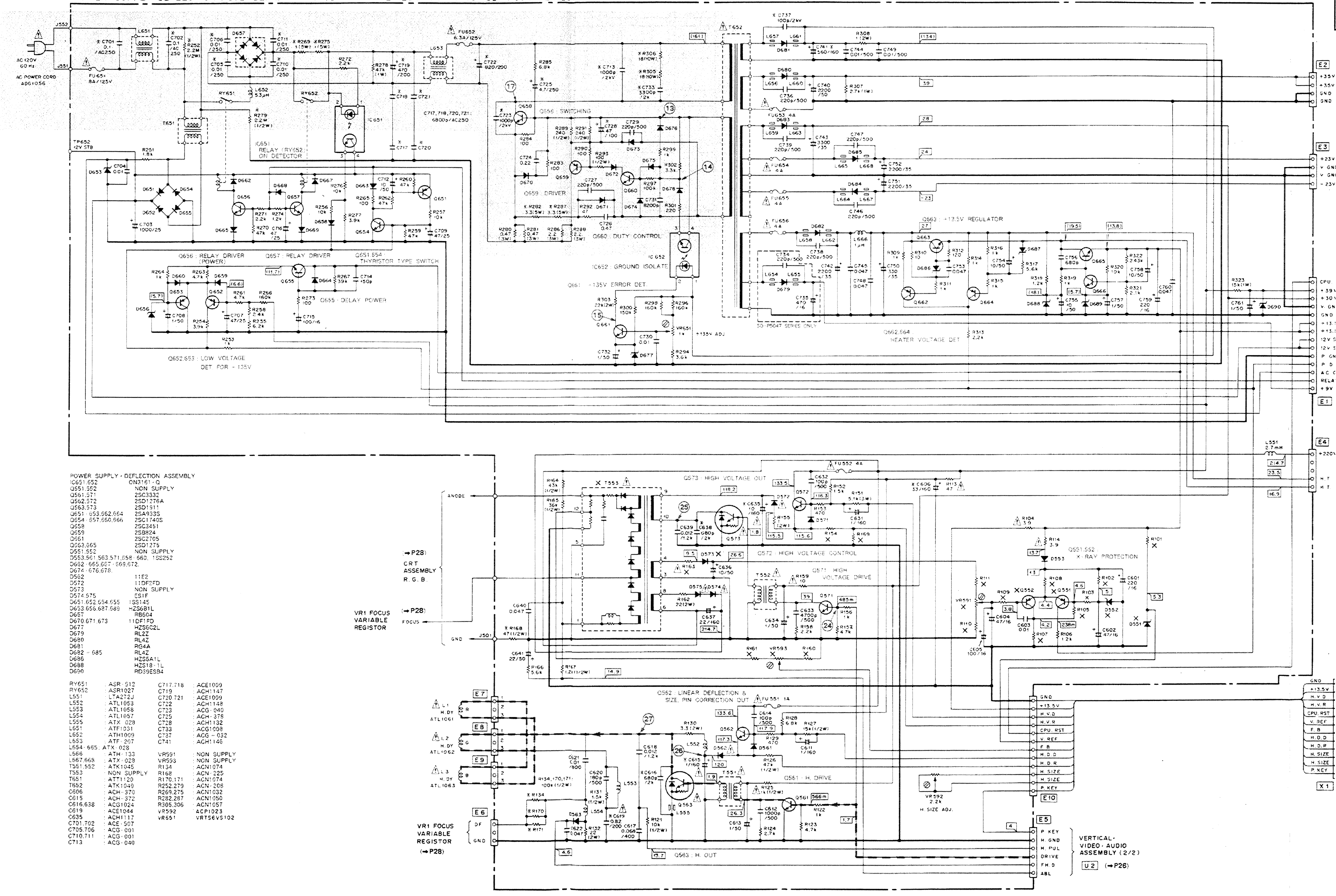
Note :
SD-P5047 SERIES : SD-P5047-Q, SD-P5043-K, SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES : SD-P504-K AND SD-P504-Q TYPES


4
5
6
7
8
9
A
B
C
D
Q145 147 148 151 COLOR NOISE REDUCTION
Q136 142 PEDESTAL CLAMP
Q249 BUFFER
Q155 BUFFER
Q135 BUFFER
Q130 131 INVERTER
Q152 BUFFER
IC104 SHARPNESS & VNR
Q136 137 143 144 COMB FILTER
Q127 132 AFC AMP
Q133 BUFFER
IC105 VIDEO CHROMA AND DEFLECTION SIGNAL PROCESSOR
ACC DET
AIC
KILLER
APC
TINT CONT
VCO (3.58MHz)
COLOR TRACK
PEAK CLAMP
ACC AMP
COLOR CONT
DEM
CARRIER FILTER
SW
Y DELAY LINE
A-DELAY LINE (1)
A-DELAY LINE (2)
APATURE CONT
CONTRAST CONT Y AMP
CLAMP
BRIGHT
WPL LIMITER
BLANKING
BLACK LEVEL ADJ
1/L VER COUNT DOWN / OUT
1/L HAR COUNT DOWN / OUT
BURST GATE PULSE GEN
HOR AFC LOCK DET
VER OUT
HOR SYNC SEP
VER SYNC SEP
VER INTEGRAL
HOLD DOWN
HOR AFC
HOR VCO
HOR VCC (6.3V)
HOR OUT
SHUT DOWN
VIDEO
Q153 BUFFER
Q250 CURRENT REGULATOR
V BLK
H GND
DRIVE
Q188 R-Y INVERTER AMP
Q183 Y SIGNAL BUFFER
Q165 173 BUFFER
Q170 R-Y CLAMP
Q187 R-Y INVERTER BUFFER
Q166 174 BUFFER
Q171 G-Y CLAMP
Q184 Y SIGNAL BUFFER
Q189 B-Y INVERTER BUFFER
Q163 167 BUFFER
Q164 B-Y CLAMP
Q185 Y SIGNAL BUFFER
Q159 BLUE TAILING LIMITER
Q158 POWER OFF MUTE
Q156 157 VIDEO MUTE
Q193 194 BUFFER
Q192 CROSS TEST SIGNAL INVERTER
Q161 162 168 169 178 180 182 186 190 191 232 LINEAR WHITE CIRCUIT
Q154 V SIGNAL DET FOR CRT PROTECTION
VR103 V SIZE ADJ
VR105 R DRIVE ADJ
VR104 B DRIVE ADJ
BLUE TAILING ADJ
(AWY1097 : PRO-73 ONLY)
(AWY1099 : PRO-93 ONLY)
CRT ASSEMBLY R (AWY1090)
R. CRT DRIVE ASSEMBLY (AWZ2957)
Q801 R DRIVE
(AWY1096 : PRO-73 AND PRO-93)
CRT ASSEMBLY G (AWY1085)
G. CRT DRIVE ASSEMBLY (AWZ2958)
Q821 G DRIVE
(AWY1098 : PRO-73 ONLY)
(AWY1100 : PRO-93 ONLY)
CRT ASSEMBLY B (AWY1091)
B. CRT DRIVE ASSEMBLY (AWZ2959)
Q841 B DRIVE
ANODE
FOCUS
SCREEN
POWER SUPPLY DEFLECTION ASSEMBLY (→P29)
POWER SUPPLY DEFLECTION ASSEMBLY (→P31) E4
VR1 FOCUS VARIABLE RESISTOR ACK1025
B FOCUS ADJ
G FOCUS ADJ
R FOCUS ADJ
B SCREEN ADJ
G SCREEN ADJ
R SCREEN ADJ
E6 (→P29)
SD-P5047 SERIES ONLY

TH101	TH101 2
IC101	TC4011BP
IC102	TC4066BP
IC103	NJM78M09A
IC104	PA0030
IC105	AN5302K
Q101 103 108 112 118 122 123 Q125 126 128 129 133 135 138 Q142 145 147 156 158 160 162 Q167 169 173 174 178 180 Q182 186 190 193 249 250	2SA933S
Q104 107 109 111 119 121 124 Q127 130 132 136 137 139 141 Q143 144 148 151 155 159 161 Q187 189 191 192 194 230 232	2SC1740S
Q146	2SC1845
Q149	2SD1276A
Q150	2SB950A
Q163 166 170 171	2SK246
D102 109 111 114 116 D118 131 134 D137 140 D144 146 150 152 154 247 248. D249 250	1SS252
D115 141 143	11E2
D132 133 135 136 138 139	0A90A
D153	RD3 6ESB2
L101 105 106	LAU150K
L102	LAU820K
L103	LAU100K
L104 116 118	LAU4R7K
L107 114	LAU680K
L108	ATG1006
L110	LAU3R9K
L111 113	LAU1R8M
L112	LAU3R9K
C170	ACH1131
C192	ACH 388
VR101	ACP1022
VR102	ACP1023
VR103 104	ACP1031
VR105	ACP1021
DL101	ATN1011
DL109	ATN1013
DL115	ATN1014
X101	ASS 028
X102	ASS1033

7.5 POWER SUPPLY · DEFLECTION AND SUB DEFLECTION ASSEMBLIES

☆POWER SUPPLY DEFLECTION ASSEMBLY (AWV1146 : SD-P5047 SERIES) (AWV1145 : SD-P504 SERIES)

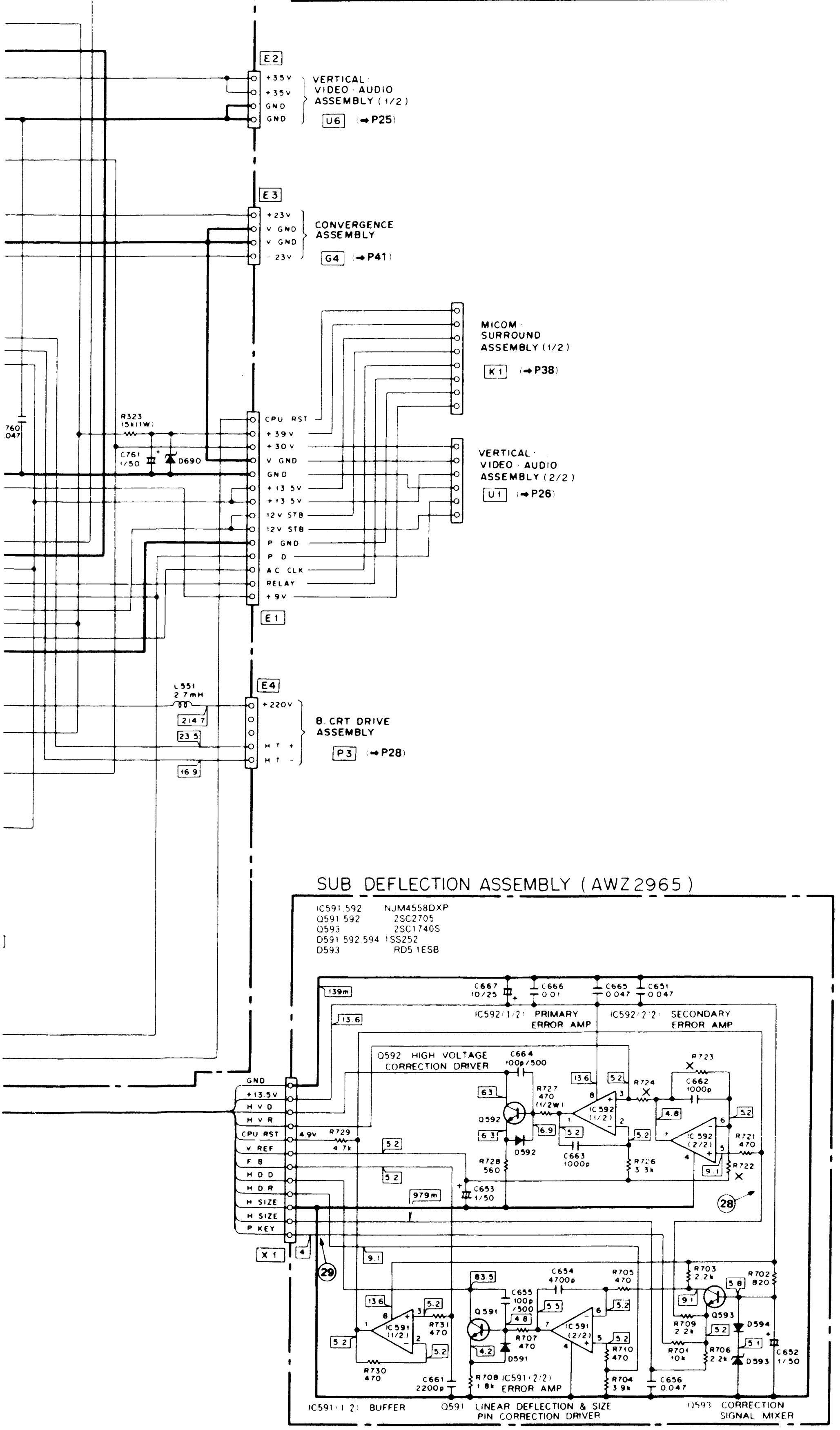

1
2
3
4
5
6
A
B
C
D
AC 120V 60 Hz
AC POWER CORD ADG1056
FU651 8A/125V
FU652 6.3A/125V
T651
T652
T553
IC651
IC652
RELAY (RY652) ON DETECTOR
Q656 : RELAY DRIVER (POWER)
Q657 : RELAY DRIVER
Q651,654 : THYRISTOR TYPE SWITCH
Q655 : DELAY POWER
Q652,653 : LOW VOLTAGE DET FOR -135V
Q658 : SWITCHING
Q659 : DRIVER
Q660 : DUTY CONTROL
IC652 : GROUND ISOLATE
Q661 : -135V ERROR DET.
VR651 +135V ADJ.
Q663 : +12.5V REGULATOR
Q662,664 : HEATER VOLTAGE DET
SD-P5047 SERIES ONLY
Q573 : HIGH VOLTAGE OUT
Q572 : HIGH VOLTAGE CONTROL
Q571 : HIGH VOLTAGE DRIVE
Q551,552 : X-RAY PROTECTION
Q562 : LINEAR DEFLECTION & SIZE, PIN CORRECTION OUT
Q561 : H. DRIVE
Q563 : H. OUT
VR592 2.2k H. SIZE ADJ.
ANODE
CRT ASSEMBLY R.G.B. (→P28)
VR1 FOCUS VARIABLE REGISTOR (→P28)
FOCUS
GND
VR1 FOCUS VARIABLE REGISTOR (→P28)
DF
L1 H. DY ATL1061
L2 H. DY ATL1062
L3 H. DY ATL1063
E1
E2
E3
E4
E5
E6
E7
E8
E9
E10
X1
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2)
U2 (→P26)
P. KEY
H. GND
H. PUL
DRIVE
FM D
ABL
+35V
GND
+23V
V GND
-23V
CPU
+30V
+13.5V
12V STB
P. GND
P. D
A.C
RELAY
+9V
+220V
H. T
H. V. D
H. V. R
CPU. RST
V. REF
F. B
H. D. D
H. D. R
H. SIZE

POWER SUPPLY · DEFLECTION ASSEMBLY

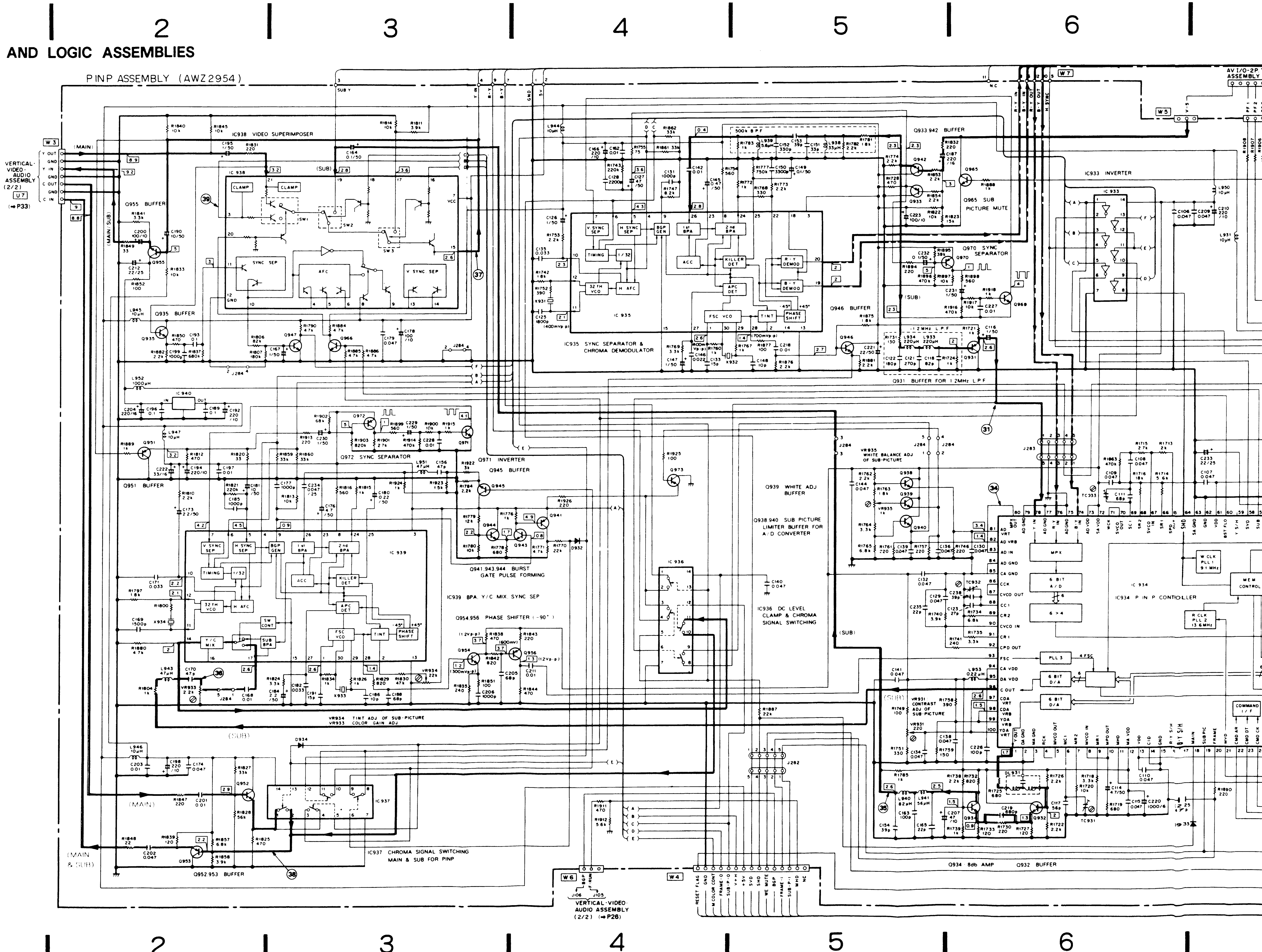
IC651,652	ON3161-Q
Q551,552	NON SUPPLY
Q561,571	2SC3332
Q562,572	2SD1276A
Q563,573	2SD1911
Q651 · 653,662,664	2SA933S
Q654 · 657,660,666	2SC1740S
Q658	2SC3451
Q659	2SB824
Q661	2SC2705
Q663,665	2SD1275
D551,552	NON SUPPLY
D553,561,563,571,658 · 660, D662 · 665,667 · 669,672, D674 · 676,678,	1SS252
D562	11E2
D572	11DF2FD
D573	NON SUPPLY
D574,575	ES1F
D651,652,654,655	1SS145
D653,656,687,689	HZS6B1L
D657	RB504
D670,671,673	11DF1FD
D677	HZS6C2L
D679	RL2Z
D680	RL4Z
D681	RG4A
D682 ~ 685	RL4Z
D686	HZS5A1L
D688	HZS18-1L
D690	RD39ESB4

RY651	: ASR-512	C717,718	: ACE1009
RY652	: ASR1027	C719	: ACH1147
L551	: LTA272J	C720,721	: ACE1009
L552	: ATL1053	C722	: ACH1148
L553	: ATL1056	C723	: ACG-040
L554	: ATL1057	C725	: ACH-378
L555	: ATX-028	C728	: ACH1132
L651	: ATF1031	C733	: ACG1008
L652	: ATH1009	C737	: ACG-032
L653	: ATF-207	C741	: ACH1146
L654 · 665	: ATX-028		
L666	: ATH-133	VR591	: NON SUPPLY
L667,668	: ATX-028	VR593	: NON SUPPLY
T551,552	: ATK1045	R134	: ACN1074
T553	: NON SUPPLY	R168	: ACN-225
T651	: ATT1120	R170,171	: ACN1074
T652	: ATK1049	R252,279	: ACN-208
C606	: ACH-370	R269,275	: ACN1032
C615	: ACH-372	R282,287	: ACN1050
C616,638	: ACG1024	R305,306	: ACN1057
C619	: ACE1044	VR592	: ACP1023
C635	: ACH1117	VR651	: VRTS6VS102
C701,702	: ACE-507		
C705,706	: ACG-001		
C710,711	: ACG-001		
C713	: ACG-040		

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K, SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES : SD-P504-K AND SD-P504-Q TYPES


E2
+35V
+35V
GND
GND
VERTICAL · VIDEO · AUDIO ASSEMBLY (1/2)
U6 (→P25)
E3
+23V
V GND
V GND
-23V
CONVERGENCE ASSEMBLY
G4 (→P41)
MICOM · SURROUND ASSEMBLY (1/2)
K1 (→P38)
760
.047
R323
15k(1W)
C761
1/50
D690
CPU RST
+39V
+30V
V GND
GND
+13.5V
+13.5V
12V STB
12V STB
P GND
P D
AC CLK
RELAY
+9V
E1
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2)
U1 (→P26)
L551
2.7mH
214.7
23.5
16.9
E4
+220V
HT+
HT-
B. CRT DRIVE ASSEMBLY
P3 (→P28)
SUB DEFLECTION ASSEMBLY (AWZ2965)
IC591.592 NJM4558DXP
Q591.592 2SC2705
Q593 2SC1740S
D591.592.594 1SS252
D593 RD5.1ESB
139m
13.6
C667 10/25
C666 0.01
C665 0.047
C651 0.047
IC592(1/2) PRIMARY ERROR AMP
IC592(2/2) SECONDARY ERROR AMP
Q592 HIGH VOLTAGE CORRECTION DRIVER
C664 100p/500
R727 470 (1/2W)
R723
R724
C662 1000p
63
6.3
Q592
6.9
5.2
D592
IC592 (1/2)
IC592 (2/2)
4.8
C663 1000p
R726 3.3k
R721 470
R722
9.1
R728 560
GND
+13.5V
H V D
H V R
CPU RST
V REF
F B
H D D
H D R
H SIZE
H SIZE
P KEY
4.9V
R729 4.7k
5.2
5.2
979m
C653 1/50
28
X1
4
29
9.1
83.5
C654 4700p
R705 470
R703 2.2k
R702 820
5.8
C655 100p /500
13.6
5.2
Q591
5.5
IC591 (1/2)
R731 470
4.8
IC591 (2/2)
5.2
Q593
9.1
R709 2.2k
5.2
D594
5.2
R707 470
5.2
R710 470
R701 10k
5.1
R706 2.2k
D593
C652 1/50
4.2
D591
R730 470
C661 2200p
R708 1.8k
IC591(2/2) ERROR AMP
R704 3.9k
C656 0.047
IC591(1/2) BUFFER
Q591 LINEAR DEFLECTION & SIZE PIN CORRECTION DRIVER
Q593 CORRECTION SIGNAL MIXER

7.6 PINP, PINP SUB AND LOGIC ASSEMBLIES


1
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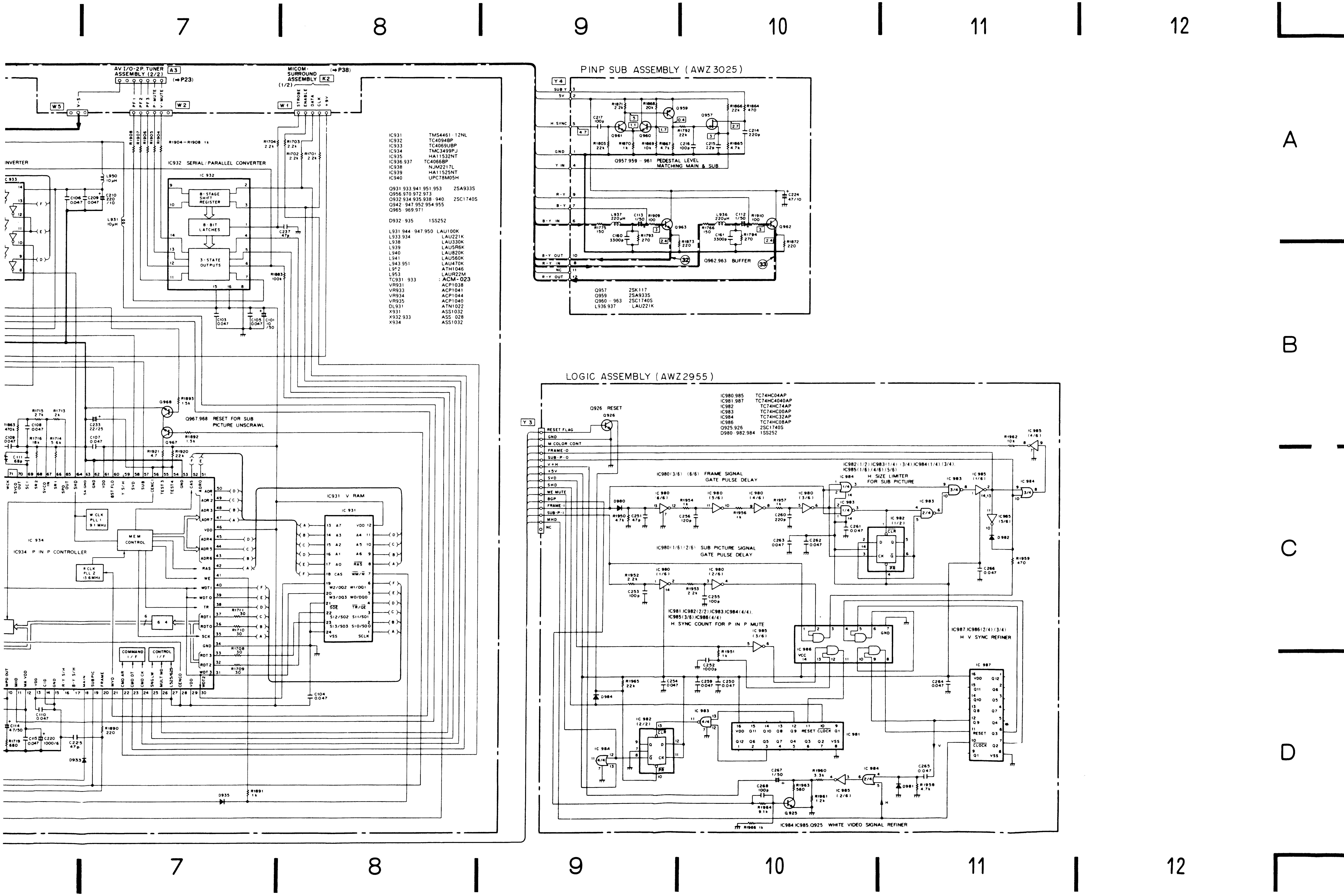
5
6
A
B
C
D
PINP ASSEMBLY (AWZ2954)
VERTICAL-VIDEO-AUDIO ASSEMBLY (2/2)
(➡P33)
IC938 VIDEO SUPERIMPOSER
Q955 BUFFER
Q935 BUFFER
IC935 SYNC SEPARATOR & CHROMA DEMODULATOR
Q933 942 BUFFER
Q965 SUB PICTURE MUTE
Q970 SYNC SEPARATOR
Q946 BUFFER
Q931 BUFFER FOR 1.2MHz LPF
IC933 INVERTER
AV I/O-2P ASSEMBLY
Q951 BUFFER
Q972 SYNC SEPARATOR
Q971 INVERTER
Q945 BUFFER
Q941.943.944 BURST GATE PULSE FORMING
IC939 BPA, Y/C MIX, SYNC SEP
Q954.956 PHASE SHIFTER (-90°)
Q939 WHITE ADJ BUFFER
Q938.940 SUB PICTURE LIMITER BUFFER FOR A/D CONVERTER
IC936 DC LEVEL CLAMP & CHROMA SIGNAL SWITCHING
VR935 WHITE BALANCE ADJ OF SUB-PICTURE
VR931 CONTRAST ADJ OF SUB-PICTURE
IC934 P IN P CONTROLLER
VR934 TINT ADJ OF SUB-PICTURE
VR933 COLOR GAIN ADJ
IC937 CHROMA SIGNAL SWITCHING MAIN & SUB FOR PINP
Q952.953 BUFFER
Q934 8db AMP
Q932 BUFFER
VERTICAL-VIDEO AUDIO ASSEMBLY (2/2) (➡P26)
(MAIN)
(SUB)
(MAIN & SUB)



7
8
9
10
11
12
A
B
C
D
AV I/O-2P. TUNER ASSEMBLY (2/2) A3 (→P23)
MICOM·SURROUND ASSEMBLY K2 (→P38) (1/2)
W5
W2
W1
V·S
PF1 PF2 PF3 P MUTE V MUTE
STROBE ENABLE DATA CLK +9V
R1904 – R1908 1k
INVERTER
IC932 SERIAL/PARALLEL CONVERTER
8-STAGE SHIFT REGISTER
8-BIT LATCHES
3-STATE OUTPUTS
Q967.968 RESET FOR SUB PICTURE UNSCRAWL
IC 934
IC934 P IN P CONTROLLER
W CLK PLL 1 9.1 MHz
R CLK PLL 2 13.6 MHz
MEM CONTROL
COMMAND I/F
CONTROL I/F
IC931 V RAM
PINP SUB ASSEMBLY (AWZ3025)
Y4
SUB Y
5V
H SYNC
GND
Y IN
R-Y
B-Y
B-Y IN
B-Y OUT
R-Y IN
NC
R-Y OUT
Q957.959 – 961 PEDESTAL LEVEL MATCHING MAIN & SUB
Q962.963 BUFFER
32
33
LOGIC ASSEMBLY (AWZ2955)
Y3
Q926 RESET
RESET FLAG
GND
M COLOR CONT
FRAME·O
SUB·P·O
V+H
+5V
SVD
SHD
WE MUTE
BGP
FRAME·I
SUB·P·I
MHD
NC
IC980(3/6) (6/6) FRAME SIGNAL GATE PULSE DELAY
IC980(1/6)(2/6) SUB PICTURE SIGNAL GATE PULSE DELAY
IC982(1/2) IC983(1/4)(3/4) IC984(1/4)(3/4) IC985(1/6)(4/6)(5/6) H SIZE LIMITER FOR SUB PICTURE
IC981 IC982(2/2) IC983 IC984(4/4) IC985(3/6) IC986(4/4) H SYNC COUNT FOR P IN P MUTE
IC987 IC986(2/4)(3/4) H V SYNC REFINER
IC984 IC985 Q925 WHITE VIDEO SIGNAL REFINER

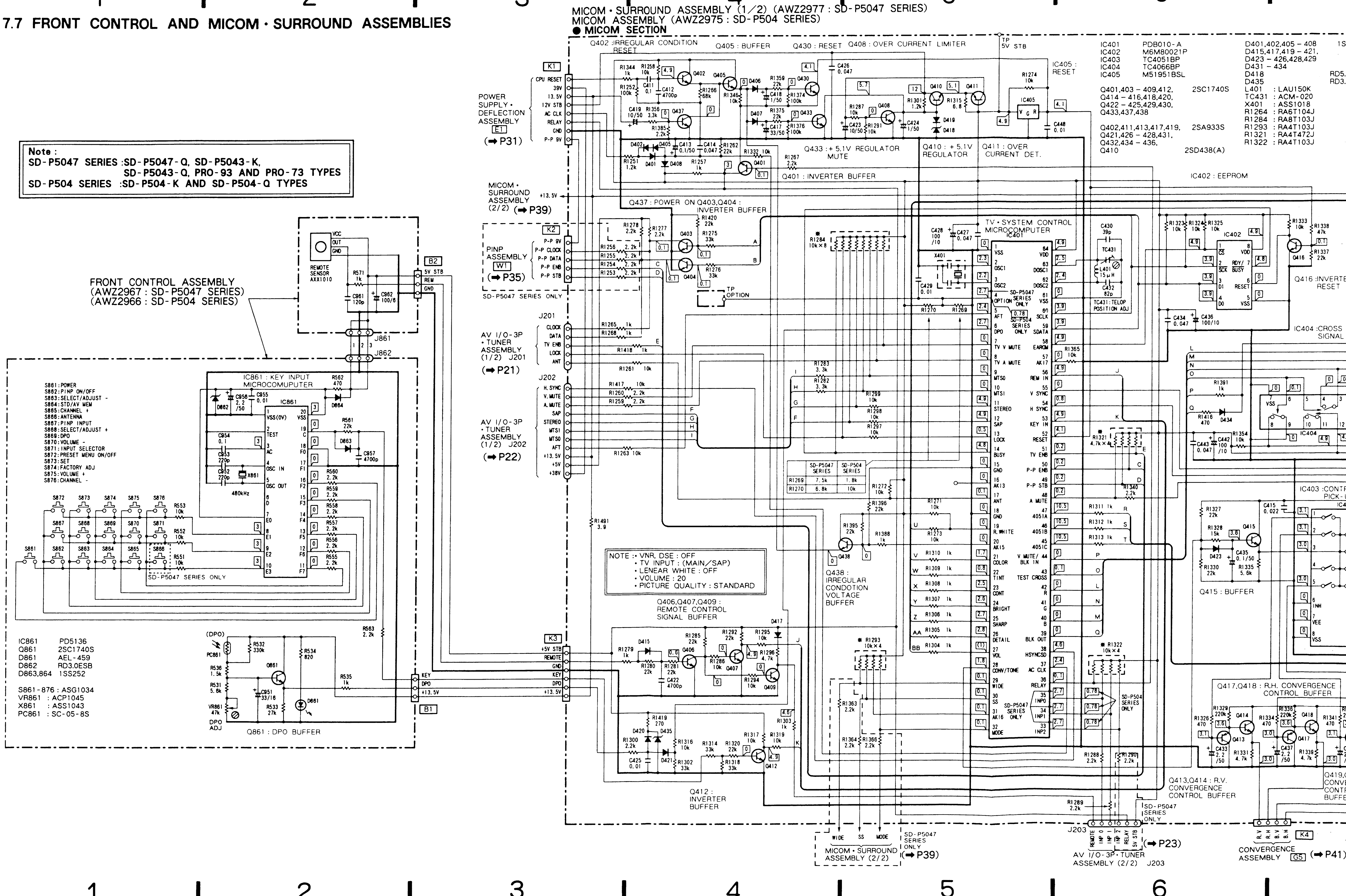
IC931	TMS4461-12NL
IC932	TC4094BP
IC933	TC4069UBP
IC934	TMC3499PJ
IC935	HA11532NT
IC936.937	TC4066BP
IC938	NJM2217L
IC939	HA11525NT
IC940	UPC78M05H
Q931.933.941.951.953 Q956.970.972.973	2SA933S
Q932.934.935.938-940. Q942-947.952.954.955 Q965-969.971	2SC1740S
D932-935	1SS252
L931.944-947.950	LAU100K
L933.934	LAU221K
L938	LAU330K
L939	LAU5R6K
L940	LAU820K
L941	LAU560K
L943.951	LAU470K
L952	ATH1046
L953	LAUR22M
TC931-933	: ACM-023
VR931	ACP1038
VR933	ACP1041
VR934	ACP1044
VR935	ACP1040
DL931	ATN1022
X931	ASS1032
X932.933	ASS-028
X934	ASS1032

Q957	2SK117
Q959	2SA933S
Q960-963	2SC1740S
L936.937	LAU221K

IC980.985	TC74HC04AP
IC981.987	TC74HC4040AP
IC982	TC74HC74AP
IC983	TC74HC00AP
IC984	TC74HC32AP
IC986	TC74HC08AP
Q925.926	2SC1740S
D980-982.984	1SS252

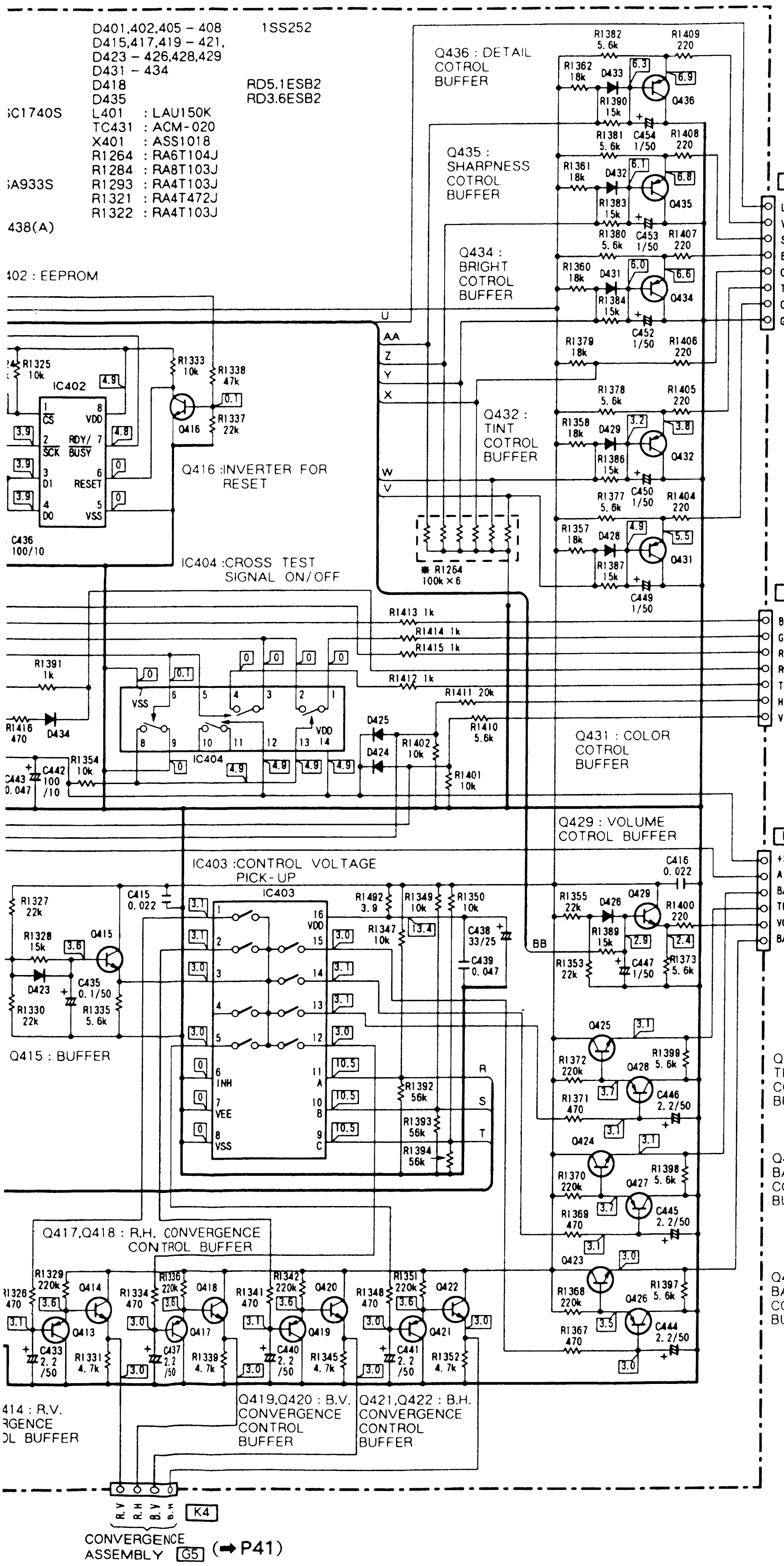
7.7 FRONT CONTROL AND MICOM · SURROUND ASSEMBLIES

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES



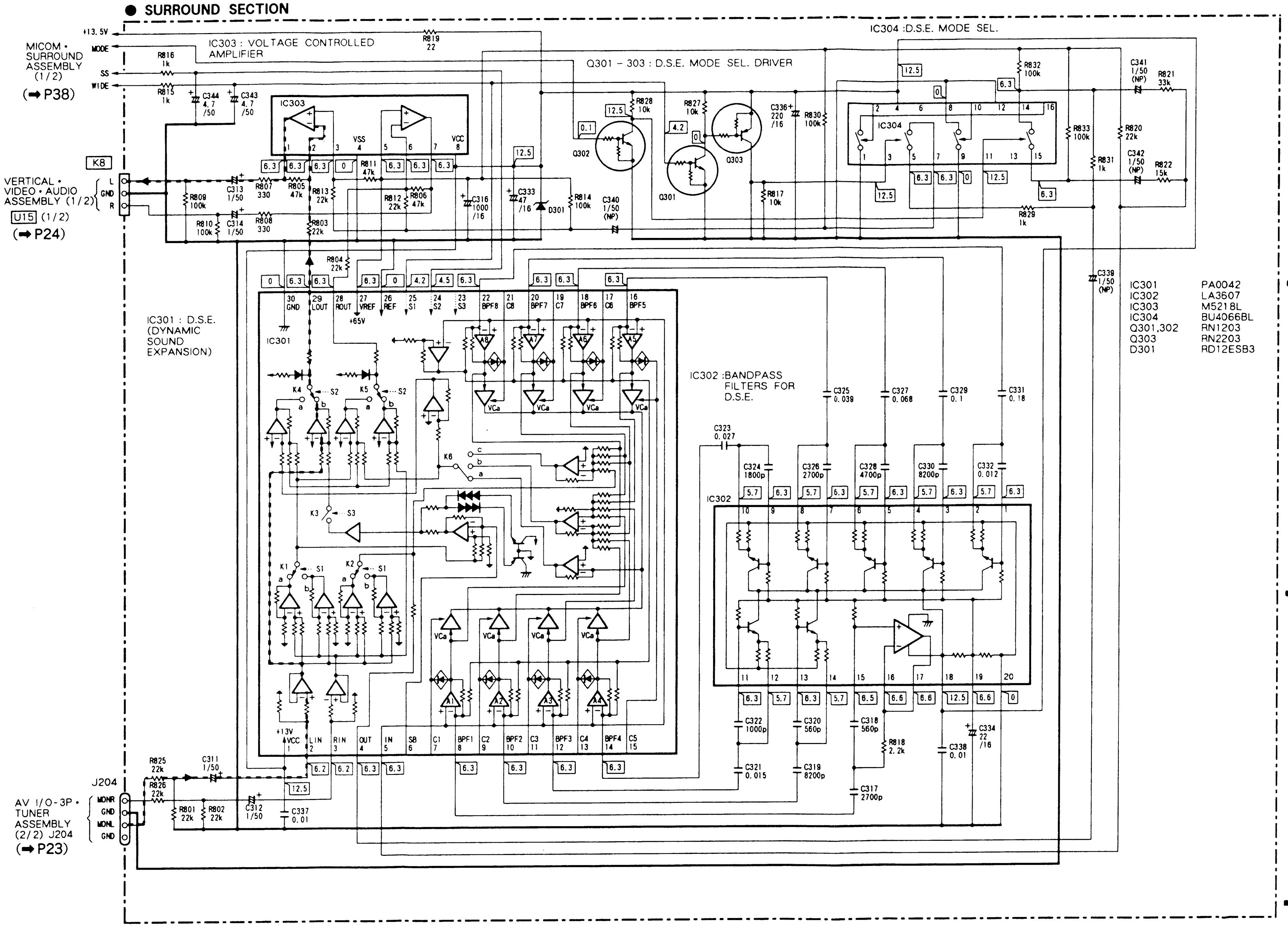
MICOM · SURROUND ASSEMBLY (1/2) (AWZ2977 : SD-P5047 SERIES)
MICOM ASSEMBLY (AWZ2975 : SD-P504 SERIES)
● MICOM SECTION
FRONT CONTROL ASSEMBLY
(AWZ2967 : SD-P5047 SERIES)
(AWZ2966 : SD-P504 SERIES)
Q402 :IRREGULAR CONDITION RESET
Q405 : BUFFER
Q430 : RESET
Q408 : OVER CURRENT LIMITER
IC405 : RESET
Q433 : + 5.1V REGULATOR MUTE
Q410 : + 5.1V REGULATOR
Q411 : OVER CURRENT DET.
Q401 : INVERTER BUFFER
Q437 : POWER ON
Q403,Q404 : INVERTER BUFFER
TV · SYSTEM CONTROL MICROCOMPUTER IC401
IC402 : EEPROM
Q416 :INVERTER RESET
IC404 :CROSS SIGNAL
IC403 :CONTR PICK-
Q415 : BUFFER
Q417,Q418 : R.H. CONVERGENCE CONTROL BUFFER
Q413,Q414 : R.V. CONVERGENCE CONTROL BUFFER
Q438 : IRREGULAR CONDOTION VOLTAGE BUFFER
Q406,Q407,Q409 : REMOTE CONTROL SIGNAL BUFFER
Q412 : INVERTER BUFFER
IC861 : KEY INPUT MICROCOMPUTER
Q861 : DPO BUFFER
REMOTE SENSOR AXX1010
POWER SUPPLY · DEFLECTION ASSEMBLY E1 (➡ P31)
MICOM · SURROUND ASSEMBLY (2/2) (➡ P39)
PINP ASSEMBLY W1 (➡ P35)
SD-P5047 SERIES ONLY
AV I/O-3P · TUNER ASSEMBLY (1/2) J201 (➡ P21)
AV I/O-3P · TUNER ASSEMBLY (1/2) J202 (➡ P22)
MICOM · SURROUND ASSEMBLY (2/2) (➡ P39)
AV I/O-3P · TUNER ASSEMBLY (2/2) J203 (➡ P23)
CONVERGENCE ASSEMBLY G5 (➡ P41)
NOTE : • VNR, DSE : OFF
• TV INPUT : (MAIN/SAP)
• LENEAR WHITE : OFF
• VOLUME : 20
• PICTURE QUALITY : STANDARD
S861:POWER
S862:PINP ON/OFF
S863:SELECT/ADJUST -
S864:STD/AV MEM
S865:CHANNEL +
S866:ANTENNA
S867:PINP INPUT
S868:SELECT/ADJUST +
S869:DPO
S870:VOLUME -
S871:INPUT SELECTOR
S872:PRESET MENU ON/OFF
S873:SET
S874:FACTORY ADJ
S875:VOLUME +
S876:CHANNEL -
IC861 PD5136
Q861 2SC1740S
D861 AEL-459
D862 RD3.0ESB
D863,864 1SS252
S861-876 : ASG1034
VR861 : ACP1045
X861 : ASS1043
PC861 : SC-05-8S
IC401 PDB010-A
IC402 M6M80021P
IC403 TC4051BP
IC404 TC4066BP
IC405 M51951BSL
Q401,403 - 409,412, Q414 - 416,418,420, Q422 - 425,429,430, Q433,437,438 2SC1740S
Q402,411,413,417,419, Q421,426 - 428,431, Q432,434 - 436, 2SA933S
Q410 2SD438(A)
D401,402,405 - 408
D415,417,419 - 421,
D423 - 426,428,429
D431 - 434
D418
D435
L401 : LAU150K
TC431 : ACM-020
X401 : ASS1018
R1264 : RA6T104J
R1284 : RA8T103J
R1293 : RA4T103J
R1321 : RA4T472J
R1322 : RA4T103J

	SD-P5047 SERIES	SD-P504 SERIES
R1269	7.5k	1.8k
R1270	6.8k	10k


D401,402,405 – 408 1SS252
D415,417,419 – 421,
D423 – 426,428,429
D431 – 434
D418 RD5.1ESB2
D435 RD3.6ESB2
L401 : LAU150K
TC431 : ACM-020
X401 : ASS1018
R1264 : RA6T104J
R1284 : RA8T103J
R1293 : RA4T103J
R1321 : RA4T472J
R1322 : RA4T103J
402 : EEPROM
Q436 : DETAIL COTROL BUFFER
Q435 : SHARPNESS COTROL BUFFER
Q434 : BRIGHT COTROL BUFFER
Q432 : TINT COTROL BUFFER
Q431 : COLOR COTROL BUFFER
Q416 : INVERTER FOR RESET
IC402
IC404 : CROSS TEST SIGNAL ON/OFF
IC403 : CONTROL VOLTAGE PICK-UP
Q415 : BUFFER
Q429 : VOLUME COTROL BUFFER
Q425,Q428 TREBLE COTROL BUFFER
Q424,Q427 : BASS COTROL BUFFER
Q423,Q426 : BALANCE COTROL BUFFER
Q417,Q418 : R.H. CONVERGENCE CONTROL BUFFER
Q419,Q420 : B.V. CONVERGENCE CONTROL BUFFER
Q421,Q422 : B.H. CONTROL BUFFER
414 : R.V. RGENCE L BUFFER
K7
LINEAR WHITE
VNR
SHARP
BRIGHT
CONTRAST
TINT
COLOR
GND
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2) U14 (➡P26)
K6
B
G
R
RGB OR TEST
H. BLK
V. BLK
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2) U13 (➡P26)
K5
+5V STB
A MUTE
BASS
TREBLE
VOLUME
BAL
VERTICAL · VIDEO · AUDIO ASSEMBLY (1/2) U12 (➡P24)
✱ R1264 100k × 6
K4
R.V R.H B.V B.H
CONVERGENCE ASSEMBLY G5 (➡P41)

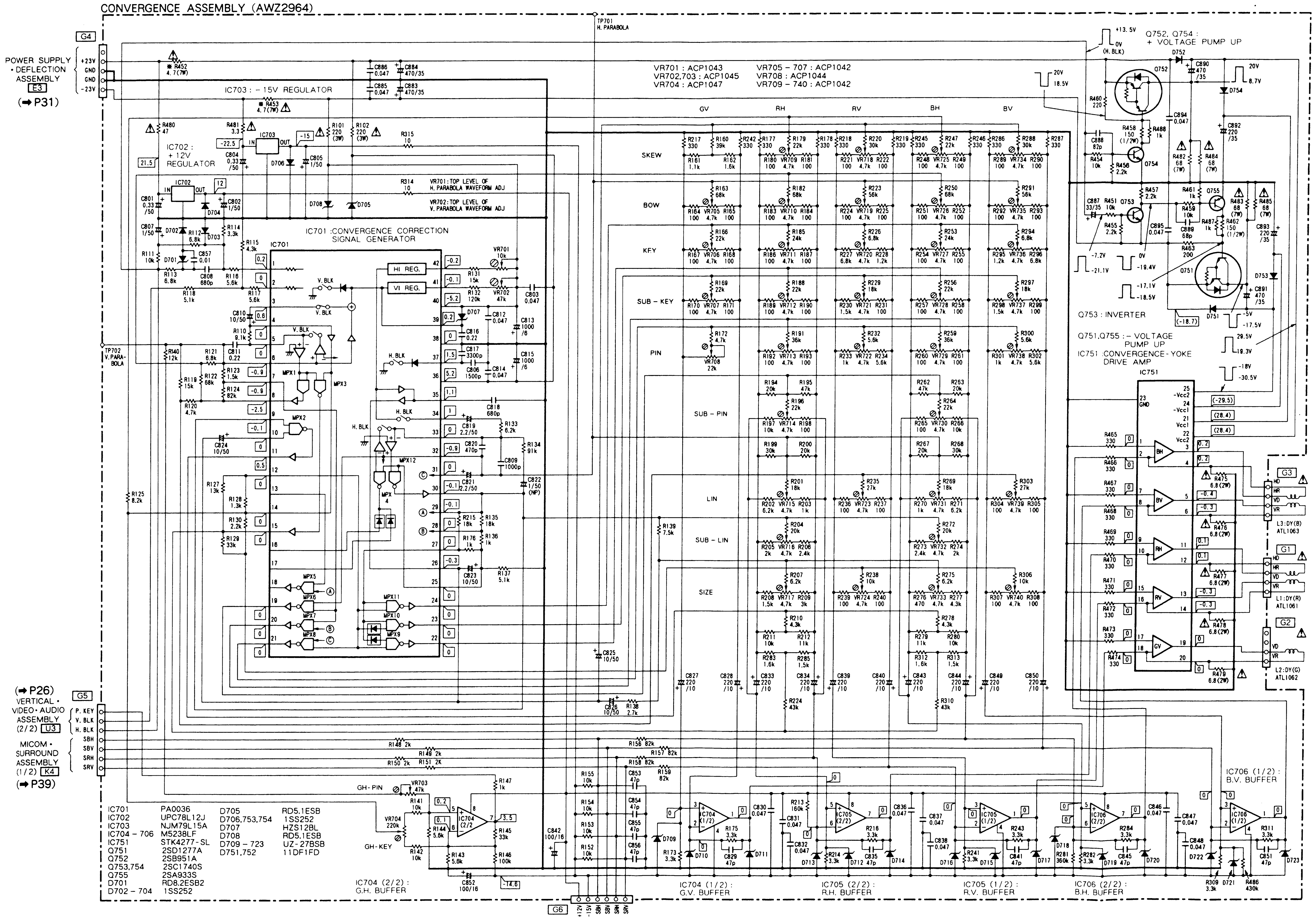
MICOM · SURROUND ASSEMBLY (2/2) (AWZ2977) (SD-P5047 SERIES ONLY)

● SURROUND SECTION


+13.5V
MODE
SS
WIDE
MICOM · SURROUND ASSEMBLY (1/2) (➡P38)
IC303 : VOLTAGE CONTROLLED AMPLIFIER
Q301 – 303 : D.S.E. MODE SEL. DRIVER
IC304 : D.S.E. MODE SEL.
K8
L
GND
R
VERTICAL · VIDEO · AUDIO ASSEMBLY (1/2) U15 (1/2) (➡P24)
IC301 : D.S.E. (DYNAMIC SOUND EXPANSION)
IC302 : BANDPASS FILTERS FOR D.S.E.
J204
MONR
GND
MONL
GND
AV I/O-3P · TUNER ASSEMBLY (2/2) J204 (➡P23)

IC301	PA0042
IC302	LA3607
IC303	M5218L
IC304	BU4066BL
Q301,302	RN1203
Q303	RN2203
D301	RD12ESB3

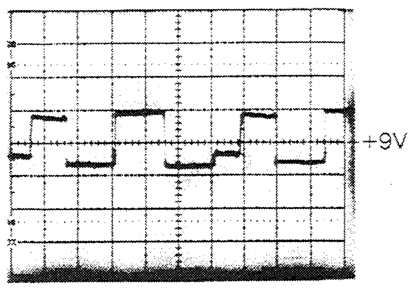
7.8 CONVERGENCE ASSEMBLY


1
2
3
4
5
6
A
B
C
D
CONVERGENCE ASSEMBLY (AWZ2964)
POWER SUPPLY • DEFLECTION ASSEMBLY E3 (➡P31)
G4
+23V
GND
GND
-23V
IC703 : -15V REGULATOR
IC702 : +12V REGULATOR
IC701 : CONVERGENCE CORRECTION SIGNAL GENERATOR
TP701 H. PARABOLA
TP702 V. PARABOLA
VR701 : TOP LEVEL OF H. PARABOLA WAVEFORM ADJ
VR702 : TOP LEVEL OF V. PARABOLA WAVEFORM ADJ
VR701 : ACP1043
VR702,703 : ACP1045
VR704 : ACP1047
VR705 - 707 : ACP1042
VR708 : ACP1044
VR709 - 740 : ACP1042
GV
RH
RV
BH
BV
SKEW
BOW
KEY
SUB - KEY
PIN
SUB - PIN
LIN
SUB - LIN
SIZE
HI REG.
VI REG.
V. BLK
H. BLK
MPX1
MPX2
MPX3
MPX4
MPX5
MPX6
MPX7
MPX8
MPX9
MPX10
MPX11
MPX12
Q752, Q754 : + VOLTAGE PUMP UP
Q753 : INVERTER
Q751,Q755 : - VOLTAGE PUMP UP
IC751 : CONVERGENCE-YOKE DRIVE AMP
IC751
G3
G1
G2
L3 : DY(B) ATL1063
L1 : DY(R) ATL1061
L2 : DY(G) ATL1062
(➡P26) VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2) U3
G5
P. KEY
V. BLK
H. BLK
MICOM • SURROUND ASSEMBLY (1/2) K4 (➡P39)
SBH
SBV
SRH
SRV
GH-PIN
GH-KEY
IC704 (2/2) : G.H. BUFFER
IC704 (1/2) : G.V. BUFFER
IC705 (2/2) : R.H. BUFFER
IC705 (1/2) : R.V. BUFFER
IC706 (2/2) : B.H. BUFFER
IC706 (1/2) : B.V. BUFFER
G6
+12V
-15V
SBH
SBV
SRH
SRV
IC701 PA0036
IC702 UPC78L12J
IC703 NJM79L15A
IC704 - 706 M5238LF
IC751 STK4277-SL
Q751 2SD1277A
Q752 2SB951A
Q753,754 2SC1740S
Q755 2SA933S
D701 RD8.2ESB2
D702 - 704 1SS252
D705 RD5.1ESB
D706,753,754 1SS252
D707 HZS12BL
D708 RD5.1ESB
D709 - 723 UZ-27BSB
D751,752 11DF1FD

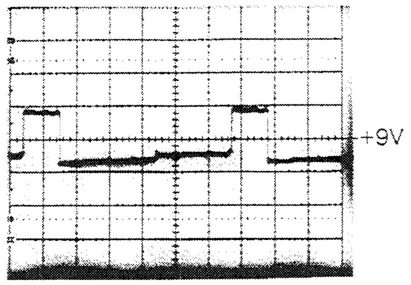
The waveforms at each position

Input signal :
①-㊴ : color bar VDP input
Picture quality : standard
Range : DC rangs (without notice)

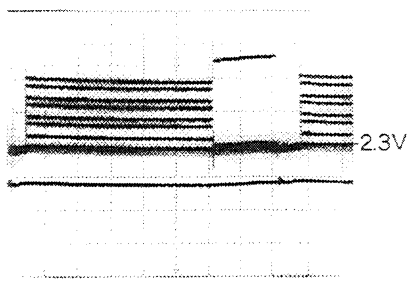
① TP-47R
V : 1V/div, H : 10μsec/div



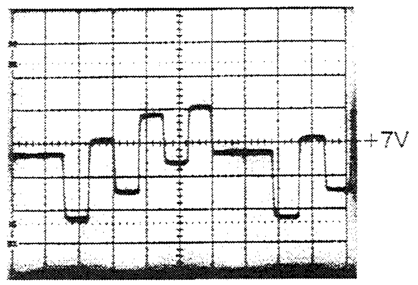
④ TP-47G
V : 1V/div, H : 10μsec/div



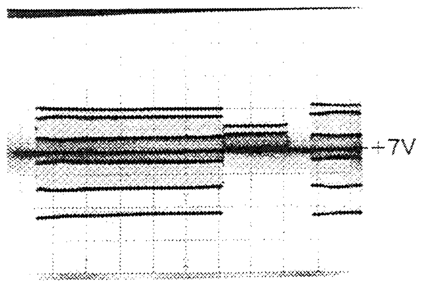
⑥ TP-05
V : 100mV/div, H : 2msec/div



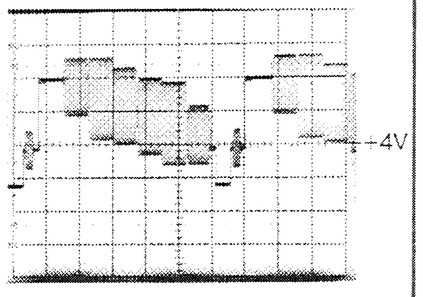
② TP-46B
V : 1V/div, H : 10μsec/div



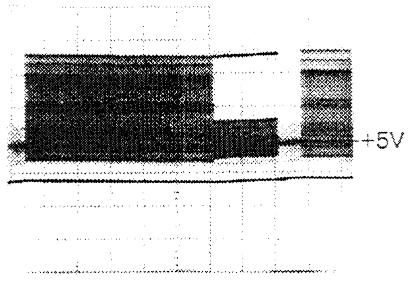
V : 1V/div, H : 2μsec/div



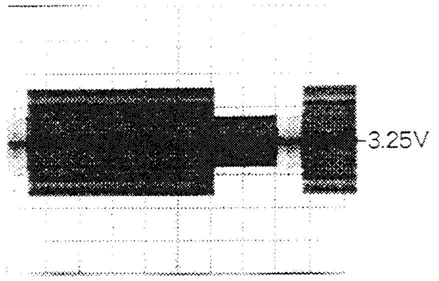
⑤ TP-12
V : 500mV/div, H : 10μsec/div



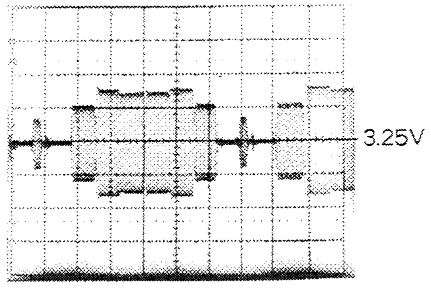
V : 500mV/div, H : 2mV/div



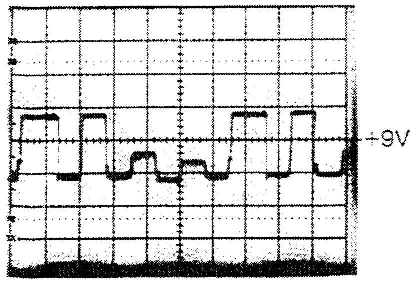
⑦ TP-41
V : 100mV/div, H : 2msec/div



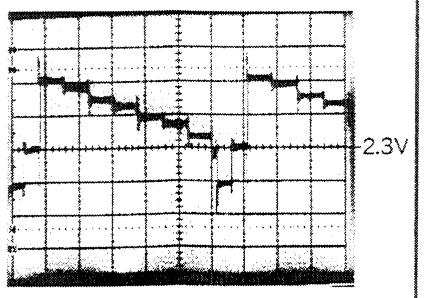
V : 100mV/div, H : 10μsec/div



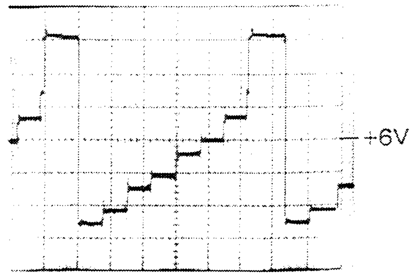
③ TP-47B
V : 1V/div, H : 10μsec/div



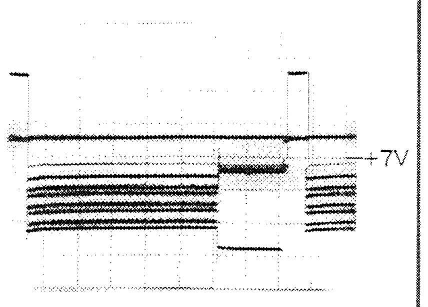
⑥ TP-05
V : 100mV/div, H : 10μsec/div



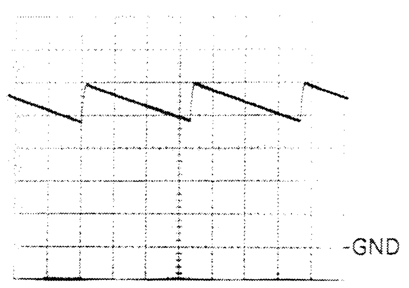
⑧ TP-13
V : 500mV/div, H : 10μsec/div



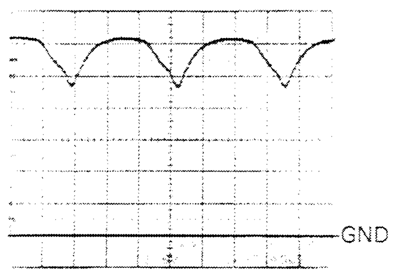
⑧ TP-13
V : 1V/div, H : 2msec/div



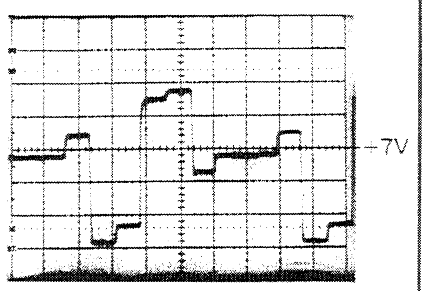
⑪ C170 ⊕ side for V. GND
V : 1V/div, H : 5msec/div



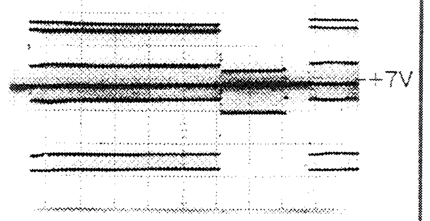
⑮ Q661 Collector for V.GND
V : 20V/div, H : 5msec/div



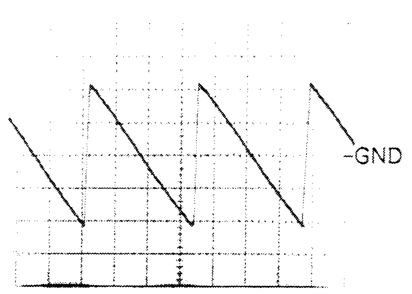
⑨ TP-46R
V : 1V/div, H : 10μsec/div



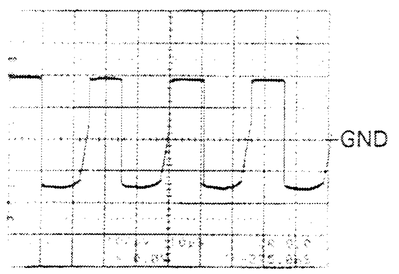
V : 1V/div, H : 2msec/div



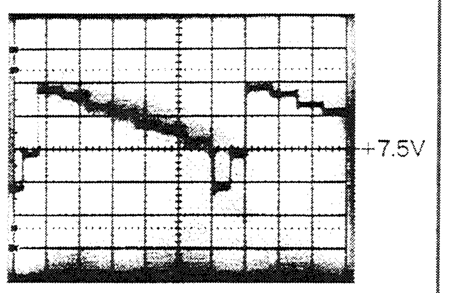
⑫ R334 lead of C208 side
for V. GND
V : 0.5V/div, H : 5msec/div



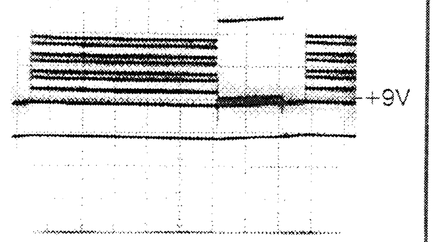
⑬ D676 Cathode
V : 5V/div, H : 10μsec/div



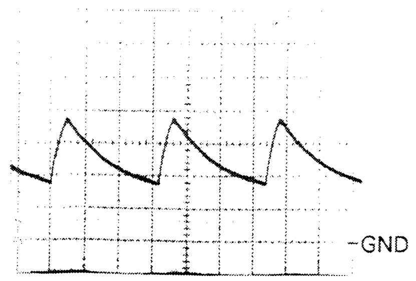
⑯ TP-01
V : 500mV/div, H : 10μsec/div



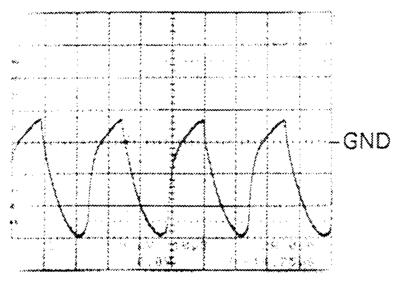
V : 500mV/div, H : 2msec/div



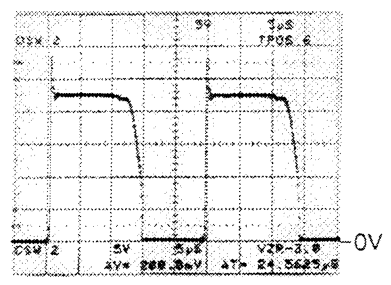
⑩ IC105 Pin 15 for H. GND
V : 1V/div, H : 20μsec/div



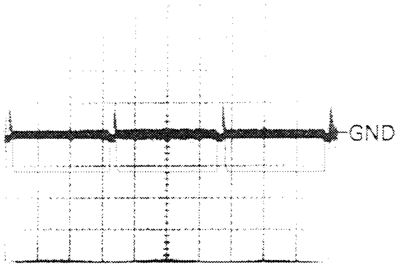
⑭ C731 (both sides)
V : 2V/div, H : 10μsec/div



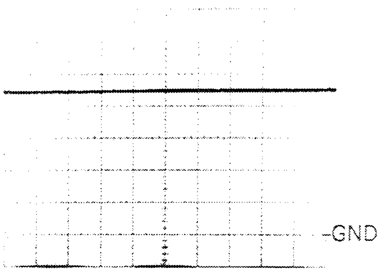
⑰ Q658 Collector for emitter
V : 50V/div, H : 5μsec/div
(Use the 10 : 1 probe)



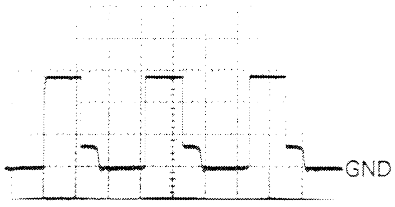
⑱ IC105 Pin 13 (AFC) for H. GND
V : 50mV/div. H : 5msec/div
AC range



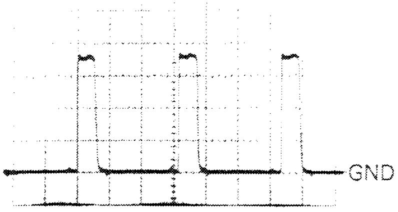
IC105 Pin 13 (AFC) for H. GND
V : 1V/div. H : 5msec/div



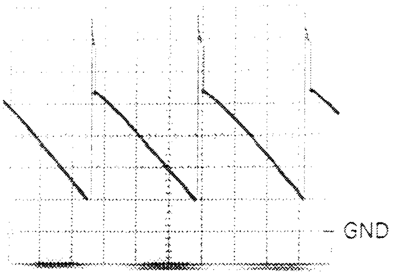
⑲ DRIVE for H. GND
V : 1V/div. H : 20μsec/div



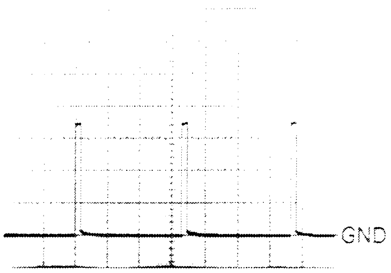
⑳ IC105 Pin 19 for H. GND
V : 0.5V/div. H : 20μsec/div



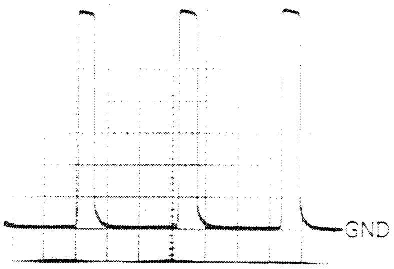
㉑ TP-609 (V. OUT)
for TP-605 (V.GND)
V : 5V/div. H : 5msec/div



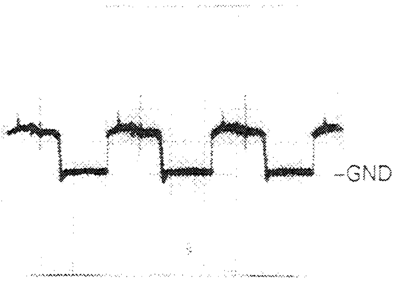
㉒ V. BLK for V. GND
V : 2V/div. H : 5msec/div



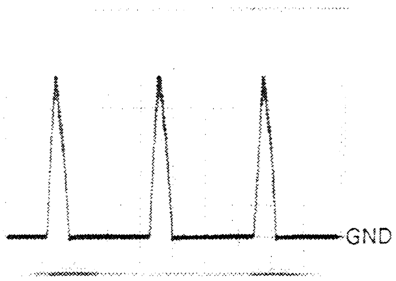
㉓ H. BLK for H. GND
V : 2V/div. H : 20μsec/div



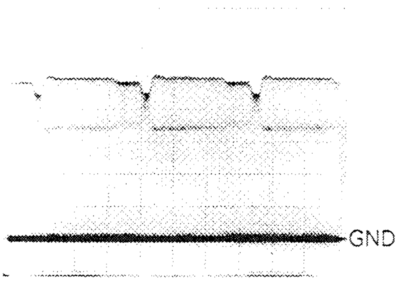
㉔ Q571 Base for TP-554 (GND)
V : 0.2V/div. H : 20μsec/div



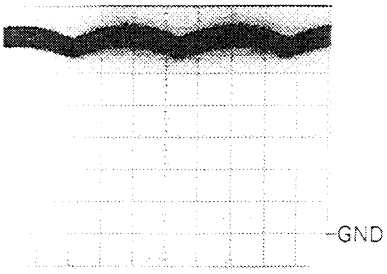
㉕ Q573 Collector
for TP-554 (GND)
V : 200V/div. H : 20μsec/div



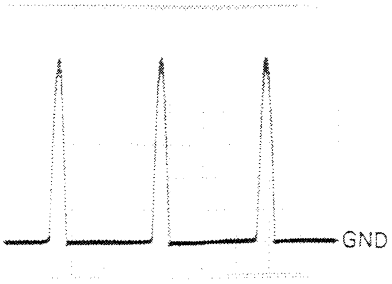
V : 200V/div. H : 5msec/div



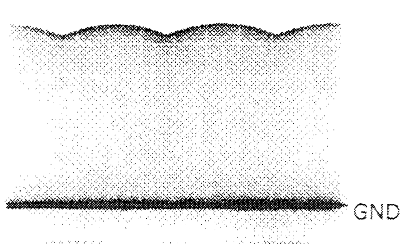
㉖ D562 Cathode
for TP-554 (H. GND)
V : 20V/div. H : 5msec/div



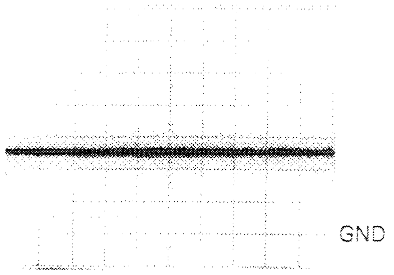
㉗ Q563 Collector
for emitter (H. GND)
V : 200V/div. H : 20μsec/div



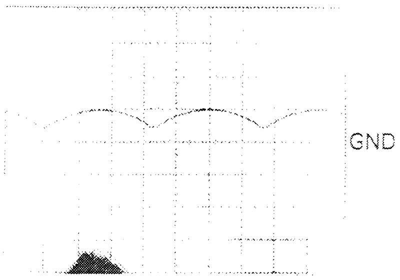
㉗ Q563 Collector
for emitter (H. GND)
V : 200V/div, H : 5msec/div



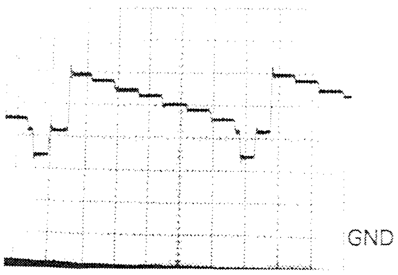
㉘ IC591 Pin 1
V : 2V/div, H : 5msec/div



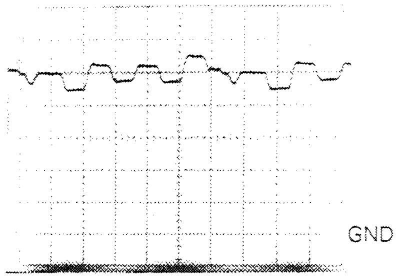
㉙ X1 Pin 1 (Pin key)
V : 5V/div, H : 5msec/div



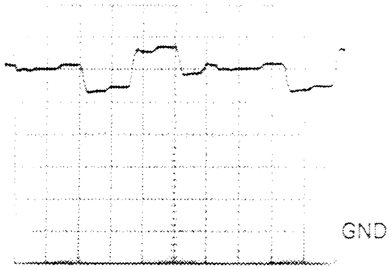
㉛ C116 ⊖ side (Y signal)
500mV/div, 10μsec/div



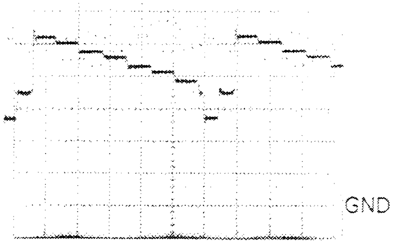
㉜ Q963 Emitter (B−Y signal)
500mV/div, 10μsec/div



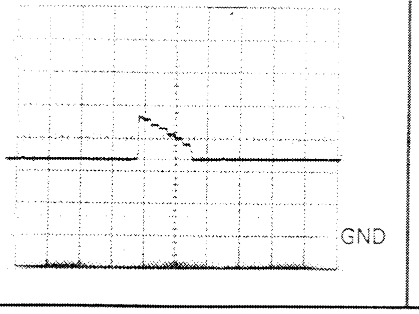
㉝ Q962 Emitter (R−Y signal)
500mV/div, 10μsec/div



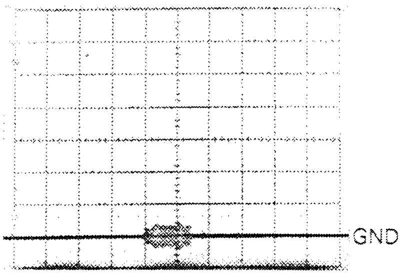
㉞ IC934 Pin 80
(Y, B-Y, R-Y signal)
500mV/div, 10μsec/div



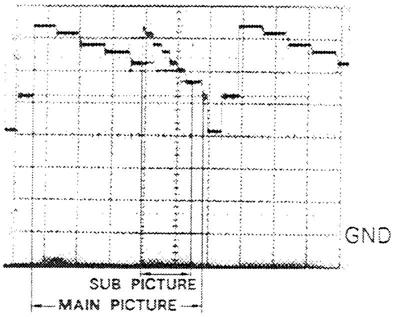
㉟ R1785 and L940 side
(Y signal of SUB picture)
1V/div, 10μsec/div



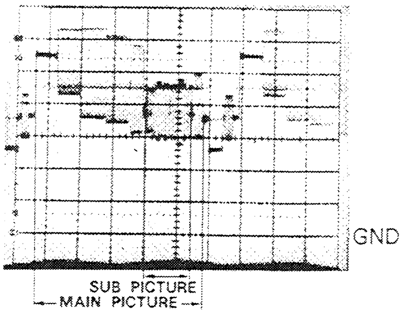
㊱ VR933 side of C170 lead
(CHROMA signal of SUB picture)
500mV/div, 10μsec/div



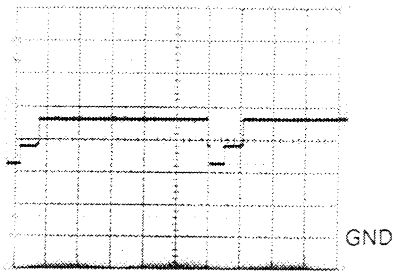
㊲ IC938 Pin 15 (P IN P Y signal)
500mV/div, 10μsec/div

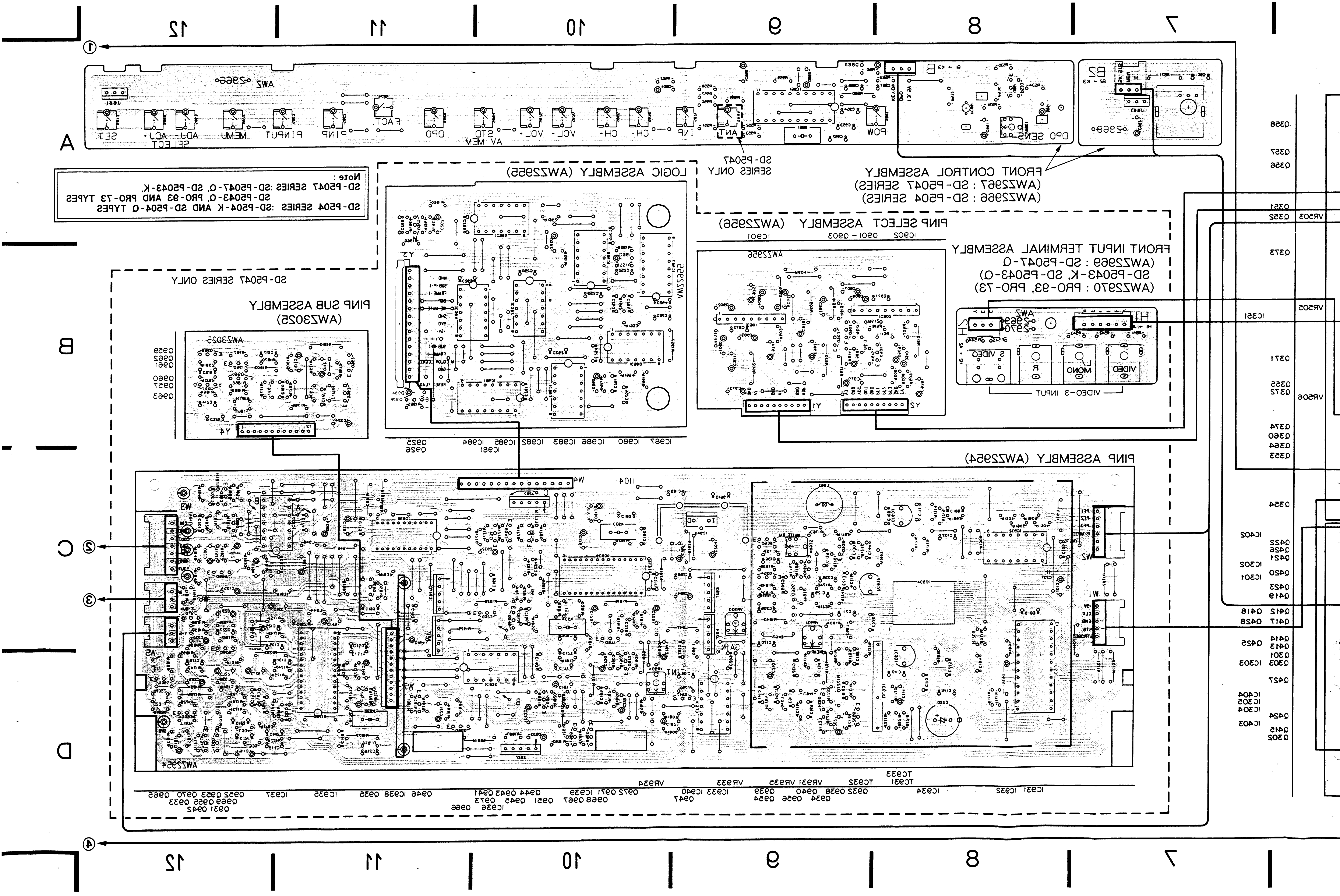


㊳ Q953 Base
(P IN P CHROMA signal)
500mV/div, 10μsec/div



㊴ IC938 Pin 3 (White signal in
P IN P for MAIN picture)
1V/div, 10μsec/div



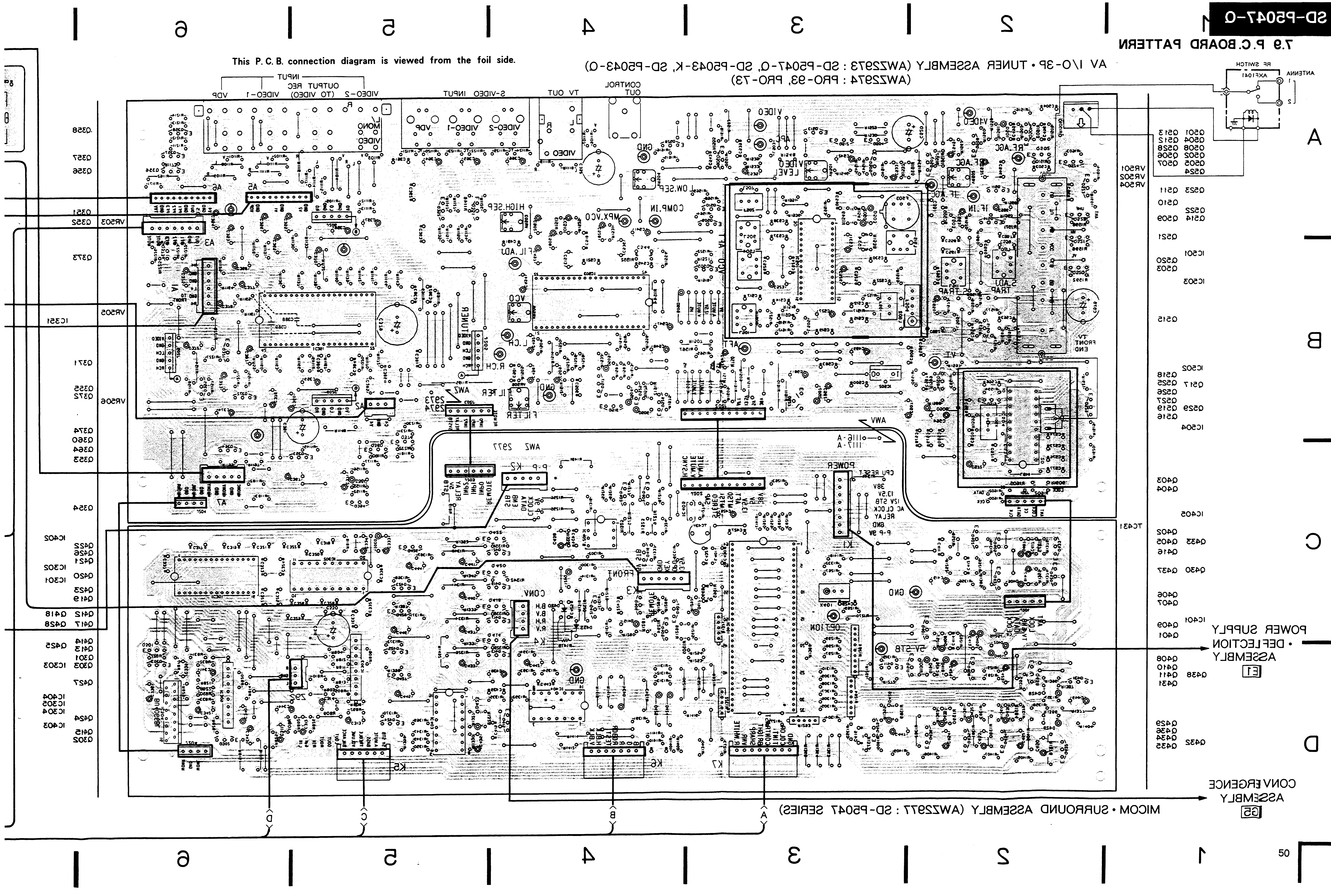

12
11
10
9
8
7
A
B
C
D
①
②
③
④
SET
ADJ+
ADJ-
SELECT
MEMU
PINPUT
PINP
FACT
DPO
STD
AV MEM
VOL+
VOL-
CH+
CH-
INP
ANT
POW
DPO SENS
AWZ2966
AWZ2968
B1
B2
SD-P5047 SERIES ONLY
FRONT CONTROL ASSEMBLY
(AWZ2967 : SD-P5047 SERIES)
(AWZ2966 : SD-P504 SERIES)
LOGIC ASSEMBLY (AWZ2955)
PINP SELECT ASSEMBLY (AWZ2956)
IC901 Q901 - Q903 IC902
FRONT INPUT TERMINAL ASSEMBLY
(AWZ2969 : SD-P5047-Q)
(SD-P5043-K, SD-P5043-Q)
(AWZ2970 : PRO-93, PRO-73)
S VIDEO
R
L MONO
VIDEO
VIDEO-3 INPUT
PINP SUB ASSEMBLY
(AWZ3025)
Y1
Y2
Y3
Y4
PINP ASSEMBLY (AWZ2954)
W1
W2
W3
W4
W5
W6
GAIN
TINT
IC987 IC980 IC986 IC983 IC982 IC985 IC984 IC981 Q925 Q926
Q959 Q962 Q961 Q960 Q957 Q963
Q358
Q357
Q356
Q351
Q352
VR503
Q373
VR505
IC351
Q371
Q355
Q372
VR506
Q374
Q360
Q364
Q353
Q354
IC402
Q422
Q426
Q421
IC302
Q420
IC301
Q423
Q419
Q412 Q418
Q417 Q428
Q414
Q413 Q425
Q301
Q303 IC303
Q427
IC404
IC305
IC304
Q424
IC403
Q415
Q302
IC931 IC932
IC934
IC933
TC931
IC932
Q932 Q938 Q940 Q939
Q934 Q956 Q954
VR931 VR935
VR933
IC933 IC940
Q947
VR934
Q972 Q971 IC939
Q968 Q967
Q944 Q943 Q941
Q973 Q945 IC951 Q951
IC936
Q966
Q946 IC938 Q935
IC935
IC937
Q952 Q953 Q970 Q965
Q969 Q955 Q933
Q931 Q942

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES

7.9 P.C.BOARD PATTERN

This P.C.B. connection diagram is viewed from the foil side.

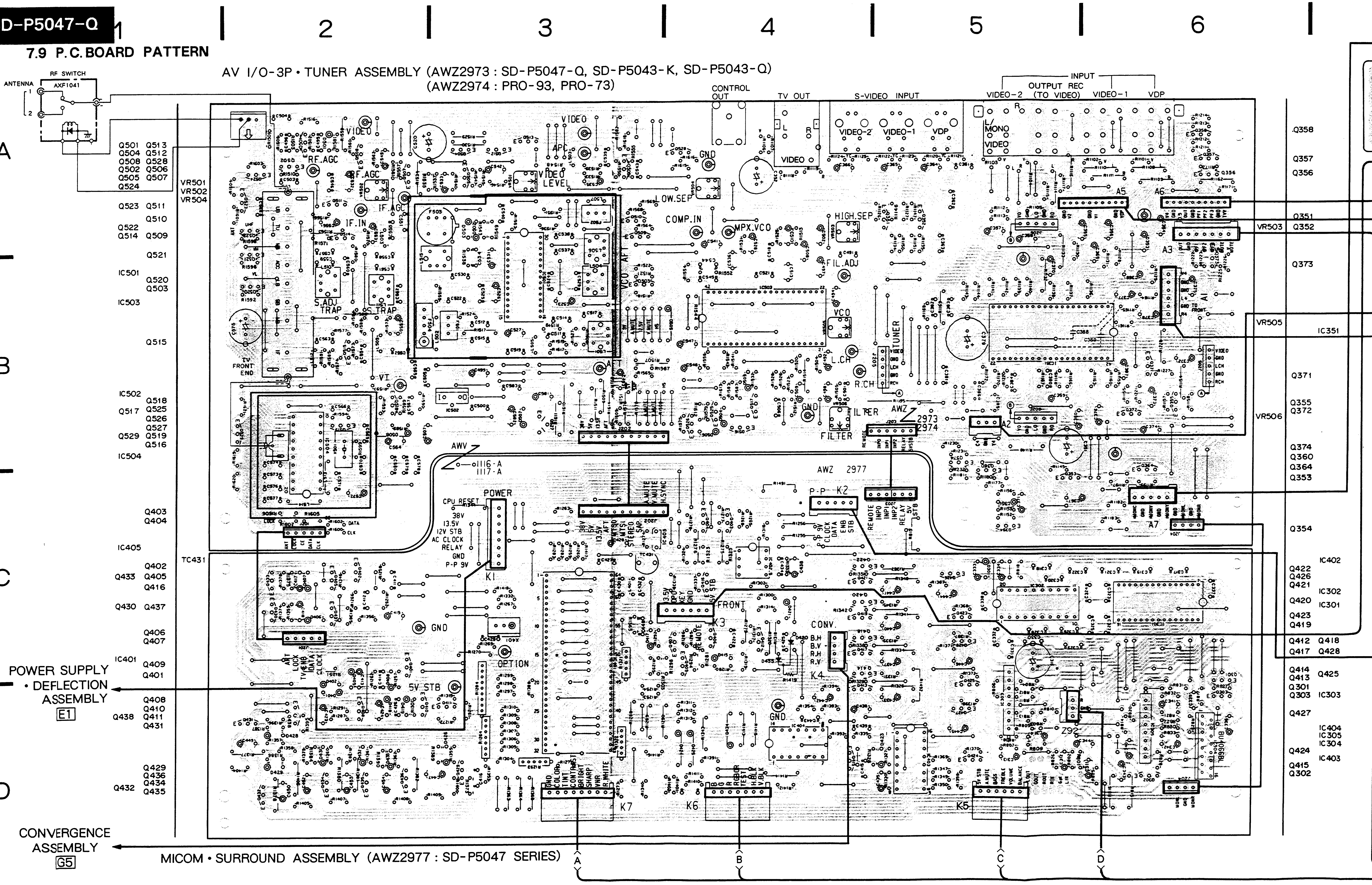
AV I/O-3P • TUNER ASSEMBLY (AWZ2973 : SD-P5047-Q, SD-P5043-K, SD-P5043-Q)
(AWZ2974 : PRO-93, PRO-73)


6
5
4
3
2
1
A
B
C
D
INPUT
OUTPUT REC (TO VIDEO)
VDP
VIDEO-1
VIDEO-2
S-VIDEO INPUT
TV OUT
CONTROL OUT
ANTENNA
RF SWITCH
AXF1041
VIDEO
MONO
HIGH.SEP
MPX.VCO
COMP.IN
LOW.SEP
VIDEO LEVEL
RF.AGC
IF.AGC
IF.IN
S.ADJ
TRAP
TV FRONT END
FIL.ADJ
VCO
FILTER
L.CH
R.CH
GND
AFT
AWZ 2973
AWZ 2974
AWZ 2977
AWV
POWER
CPU RESET
38V
13.5V
12V STB
AC CLOCK
RELAY
GND
P-P 9V
CONV
FRONT
OPTION
5V-STB
A5
A6
A3
A4
A7
K1
K2
K3
K4
K5
K6
K7
A
B
C
D
POWER SUPPLY • DEFLECTION ASSEMBLY
E1
CONVERGENCE ASSEMBLY
G5

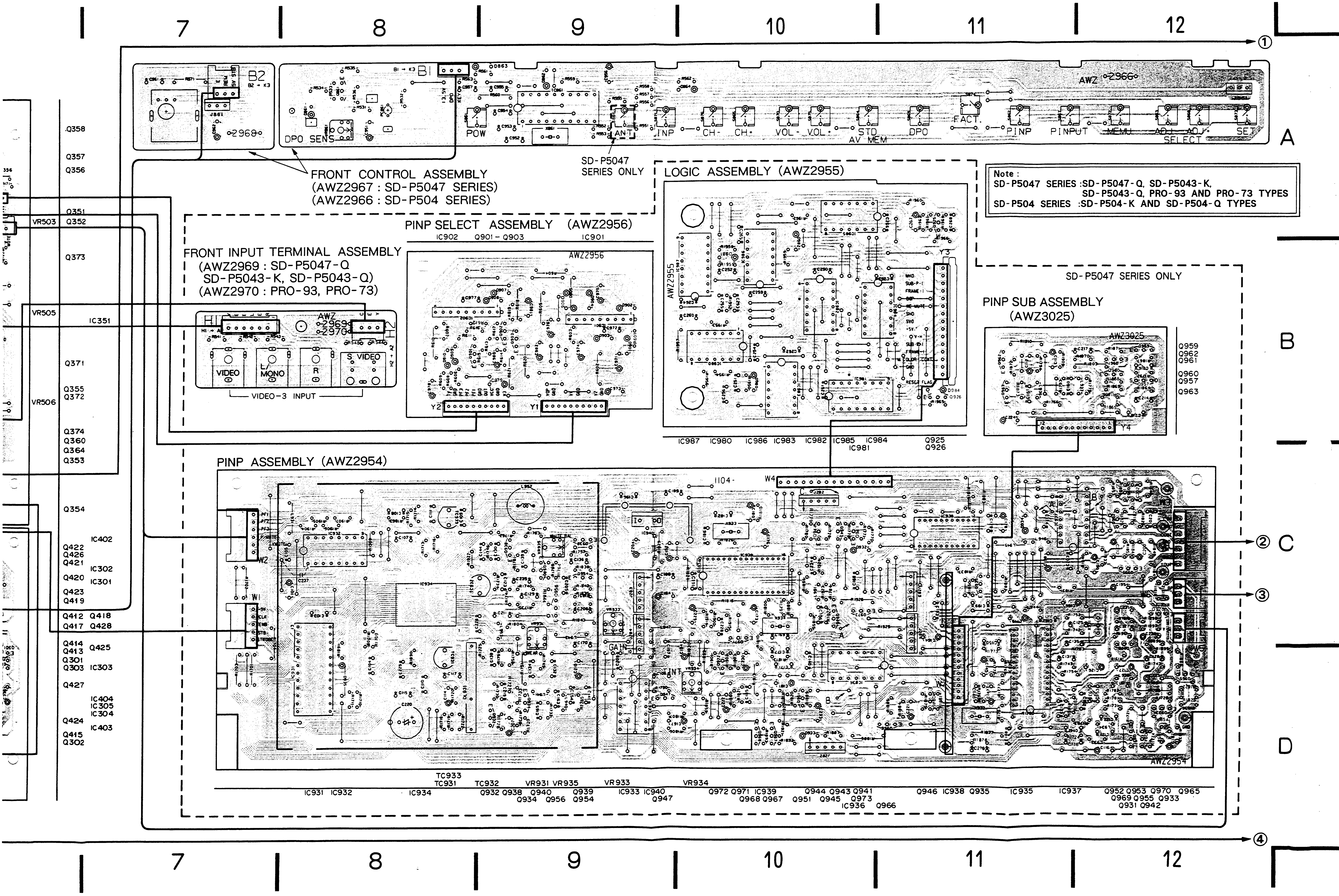
MICOM • SURROUND ASSEMBLY (AWZ2977 : SD-P5047 SERIES)

7.9 P.C. BOARD PATTERN

AV I/O-3P • TUNER ASSEMBLY (AWZ2973 : SD-P5047-Q, SD-P5043-K, SD-P5043-Q)
(AWZ2974 : PRO-93, PRO-73)


1
2
3
4
5
6
A
B
C
D
ANTENNA
RF SWITCH
AXF1041
CONTROL OUT
TV OUT
S-VIDEO INPUT
INPUT
OUTPUT REC (TO VIDEO)
VIDEO-2
VIDEO-1
VDP
L/MONO
VIDEO
RF.AGC
IF.AGC
IF.IN
APC
VIDEO LEVEL
LOW.SEP
COMP.IN
MPX.VCO
HIGH.SEP
FIL.ADJ
VCO
TUNER
L.CH
R.CH
GND
FILTER
S.ADJ TRAP
TRAP
TV FRONT END
AFT
A1
A2
A3
A5
A6
A7
AWV
1116-A
1117-A
AWZ 2973
AWZ 2974
AWZ 2977
P-P
K1
K2
K3
K4
K5
K6
K7
POWER
CPU RESET
38V
13.5V
12V STB
AC CLOCK
RELAY
P-P 9V
OPTION
5V STB
FRONT
CONV.
B.H
B.V
R.H
R.V
Z9
REMOTE
INPO
INP1
INP2
STB
CLOCK
DATA
ENB
COLOR
TINT
CONTRAST
BRIGHT
SHARP
VNR
R.WHITE
A.MUTE
V.MUTE
H.SYNC
STEREO
SAP
Q501 Q513
Q504 Q512
Q508 Q528
Q502 Q506
Q505 Q507
Q524
VR501
VR502
VR504
Q523 Q511
Q510
Q522
Q514 Q509
Q521
IC501
Q520
Q503
IC503
Q515
IC502
Q518
Q517 Q525
Q526
Q527
Q529 Q519
Q516
IC504
Q403
Q404
IC405
TC431
Q402
Q433 Q405
Q416
Q430 Q437
Q406
Q407
IC401
Q409
Q401
Q408
Q410
Q438 Q411
Q431
Q429
Q436
Q432 Q434
Q435
Q358
Q357
Q356
Q351
VR503 Q352
Q373
VR505
IC351
Q371
Q355
VR506 Q372
Q374
Q360
Q364
Q353
Q354
IC402
Q422
Q426
Q421
IC302
Q420
IC301
Q423
Q419
Q412 Q418
Q417 Q428
Q414 Q425
Q413
Q301
Q303 IC303
Q427
IC404
IC305
IC304
Q424
IC403
Q415
Q302
POWER SUPPLY • DEFLECTION ASSEMBLY
E1
CONVERGENCE ASSEMBLY
G5

MICOM • SURROUND ASSEMBLY (AWZ2977 : SD-P5047 SERIES)



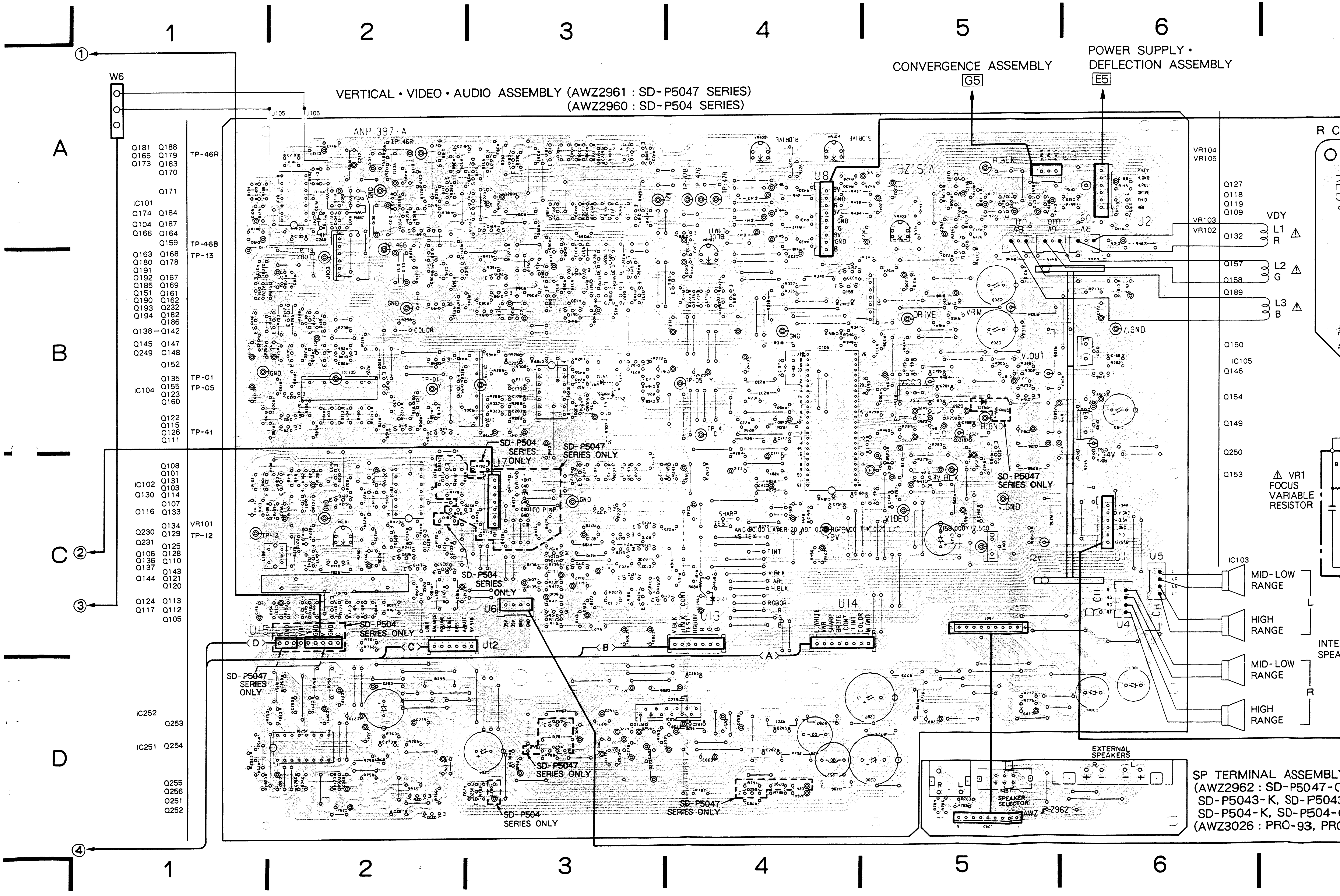
7
8
9
10
11
12
①
②
③
④
A
B
C
D
B2
B1
2968
AWZ 2966
DPO SENS
POW
ANT
INP
CH-
CH+
VOL-
VOL+
STD
AV MEM
DPO
FACT.
PINP
PINPUT
MEMU
ADJ-
ADJ+
SELECT
SET
FRONT CONTROL ASSEMBLY
(AWZ2967 : SD-P5047 SERIES)
(AWZ2966 : SD-P504 SERIES)
SD-P5047
SERIES ONLY
LOGIC ASSEMBLY (AWZ2955)
AWZ2955
Y3
PINP SELECT ASSEMBLY (AWZ2956)
IC902
Q901 - Q903
IC901
AWZ2956
Y2
Y1
FRONT INPUT TERMINAL ASSEMBLY
(AWZ2969 : SD-P5047-Q
SD-P5043-K, SD-P5043-Q)
(AWZ2970 : PRO-93, PRO-73)
H1
AWZ
2969
2970
H2
VIDEO
L/MONO
R
S VIDEO
VIDEO-3 INPUT
SD-P5047 SERIES ONLY
PINP SUB ASSEMBLY
(AWZ3025)
AWZ3025
Y4
Q959
Q962
Q961
Q960
Q957
Q963
IC987
IC980
IC986
IC983
IC982
IC985
IC984
IC981
Q925
Q926
PINP ASSEMBLY (AWZ2954)
W4
W2
W1
GAIN
AWZ2954
TC933
TC931
TC932
VR931
VR935
VR933
VR934
IC931
IC932
IC934
Q932
Q938
Q940
Q934
Q956
Q939
Q954
IC933
IC940
Q947
Q972
Q971
IC939
Q968
Q967
Q944
Q943
Q941
Q951
Q945
Q973
IC936
Q966
Q946
IC938
Q935
IC935
IC937
Q952
Q953
Q970
Q965
Q969
Q955
Q933
Q931
Q942
Q358
Q357
Q356
Q351
VR503
Q352
Q373
VR505
IC351
Q371
Q355
Q372
VR506
Q374
Q360
Q364
Q353
Q354
IC402
Q422
Q426
Q421
IC302
Q420
IC301
Q423
Q419
Q412
Q418
Q417
Q428
Q414
Q413
Q425
Q301
Q303
IC303
Q427
IC404
IC305
IC304
Q424
IC403
Q415
Q302

Note :
SD-P5047 SERIES : SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES : SD-P504-K AND SD-P504-Q TYPES

VERTICAL • VIDEO • AUDIO ASSEMBLY (AWZ2961 : SD-P5047 SERIES)
(AWZ2960 : SD-P504 SERIES)

CONVERGENCE ASSEMBLY G5

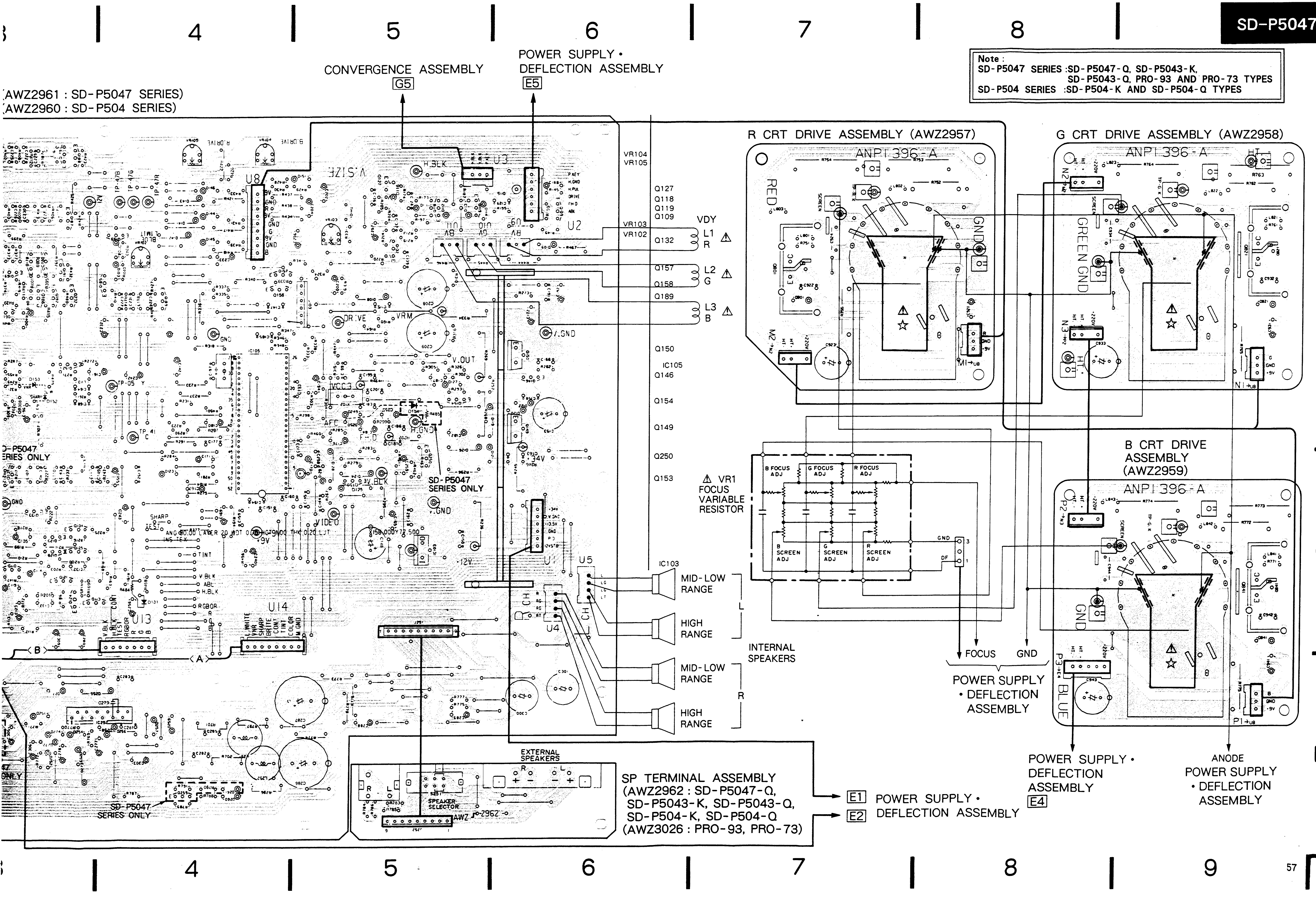
POWER SUPPLY • DEFLECTION ASSEMBLY E5



1
2
3
4
5
6
A
B
C
D
①
②
③
④
W6
J105
J106
ANP1397-A
Q181 Q188
Q165 Q179
Q173 Q183
Q170
Q171
IC101
Q174 Q184
Q104 Q187
Q166 Q164
Q159
Q163 Q168
Q180 Q178
Q191
Q192 Q167
Q185 Q169
Q151 Q161
Q190 Q162
Q193 Q232
Q194 Q182
Q186
Q138—Q142
Q145 Q147
Q249 Q148
Q152
IC104 Q135 Q155 Q123 Q160
Q122 Q115 Q126 Q111
TP-46R
TP-46B
TP-13
TP-01
TP-05
TP-41
Q108 Q101
IC102 Q131 Q103
Q130 Q114
Q107
Q116 Q133
Q134
Q230 Q129
Q231
Q125
Q106 Q128
Q136 Q110
Q137
Q143
Q144 Q121
Q120
Q124 Q113
Q117 Q112
Q105
VR101
TP-12
IC252 Q253
IC251 Q254
Q255
Q256
Q251
Q252
VR104
VR105
Q127
Q118
Q119
Q109
VR103
VR102
Q132
Q157
Q158
Q189
Q150
IC105
Q146
Q154
Q149
Q250
Q153
IC103
VDY
L1 R ⚠
L2 G ⚠
L3 B ⚠
⚠ VR1
FOCUS
VARIABLE
RESISTOR
MID-LOW RANGE
HIGH RANGE
L
MID-LOW RANGE
HIGH RANGE
R
INTER
SPEA
R C
U1
U2
U3
U4
U5
U6
U7
U8
U12
U13
U14
U15
SD-P504 SERIES ONLY
SD-P5047 SERIES ONLY
SD-P504 SERIES ONLY
SD-P504 SERIES ONLY
SD-P5047 SERIES ONLY
SD-P5047 SERIES ONLY
SD-P5047 SERIES ONLY
SD-P504 SERIES ONLY
SD-P5047 SERIES ONLY
SD-P5047 SERIES ONLY
V.SIZE
H.BLK
DRIVE
VRM
V.OUT
GND
COLOR
VCC3
AFC
F.H.D
H.GND
V.GND
VIDEO
SHARP
TINT
V.BLK
ABL
H.BLK
RGBOR
R
G
B
34V
12V
9V
TP-01
TP-05 Y
TP-41 C
TP-12
TP-47B
TP-47G
TP-47R
B.DRIVE
R.DRIVE
CH
(D)
(C)
(B)
(A)
EXTERNAL SPEAKERS
R
L
SPEAKER SELECTOR
AWZ2962

SP TERMINAL ASSEMBL
(AWZ2962 : SD-P5047-
SD-P5043-K, SD-P504
SD-P504-K, SD-P504-
(AWZ3026 : PRO-93, PR

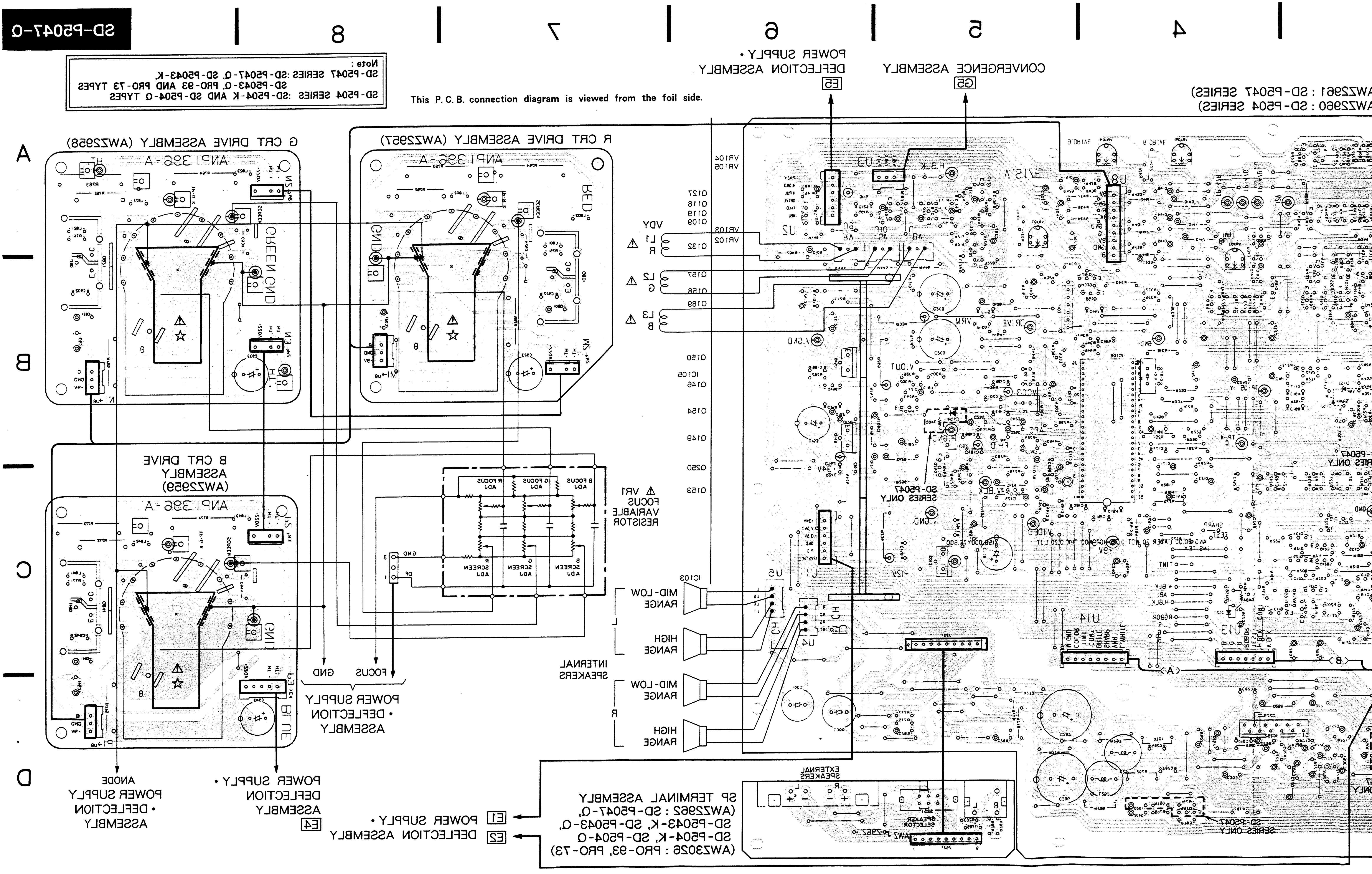
Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES

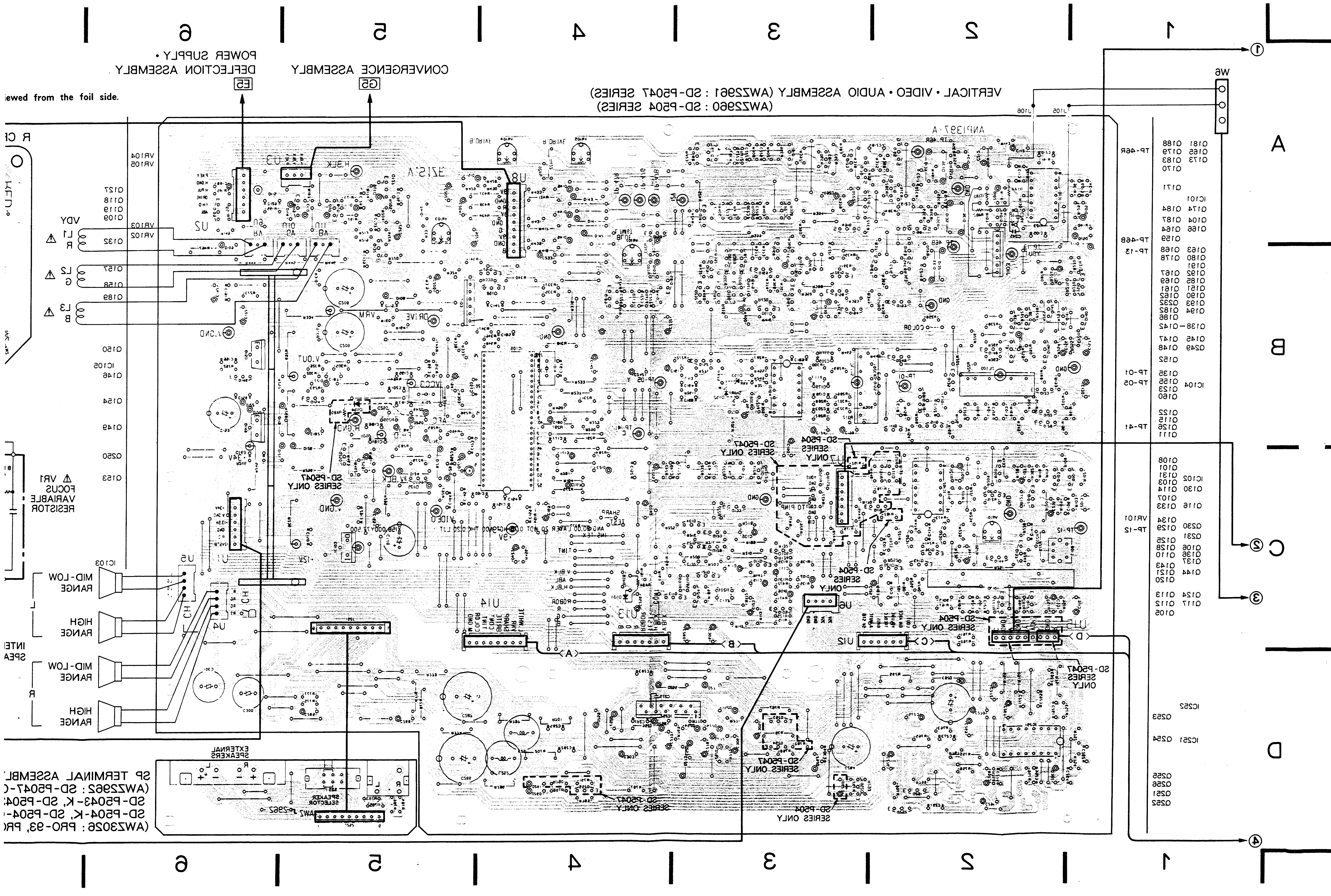


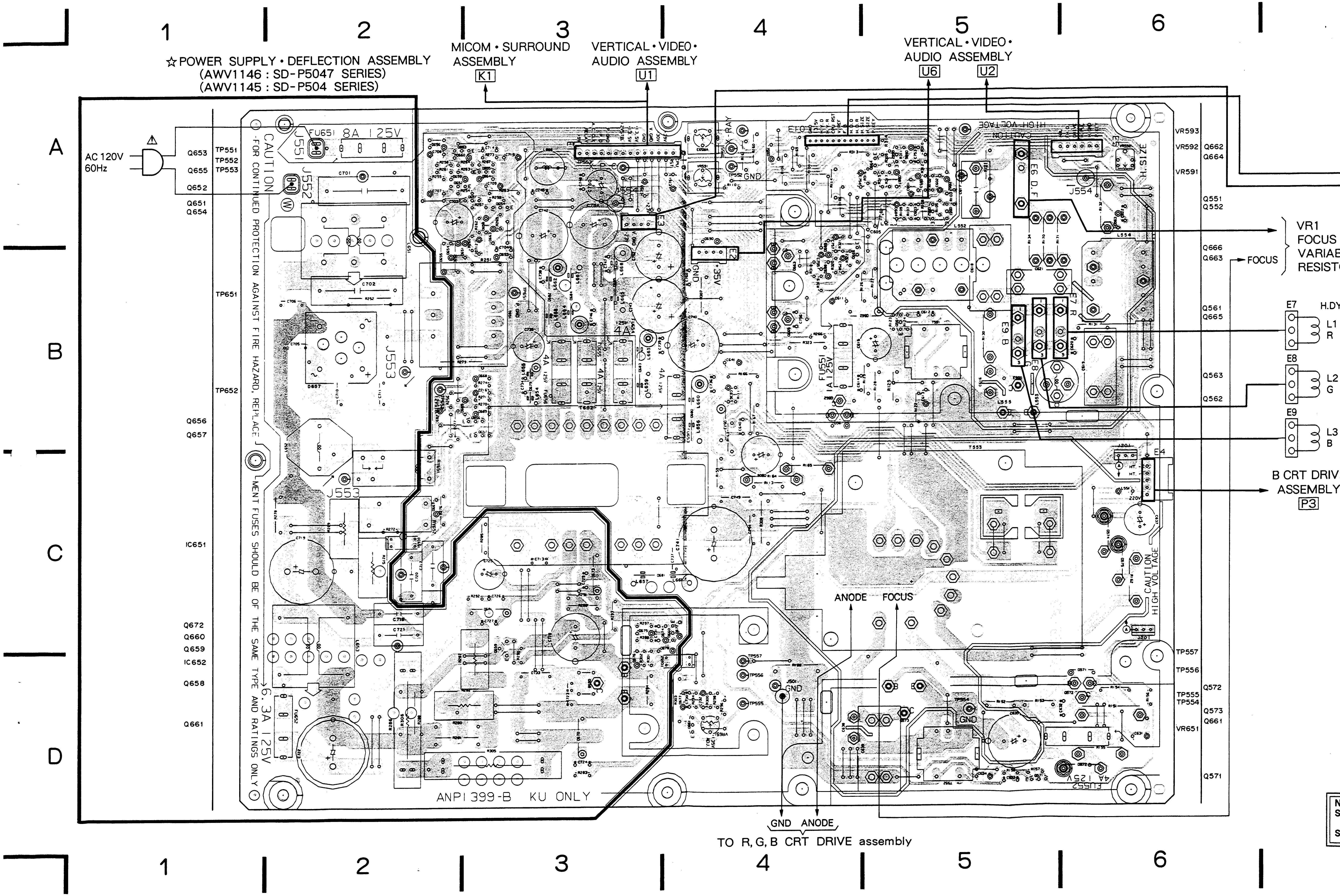
4
5
6
7
8
CONVERGENCE ASSEMBLY
G5
POWER SUPPLY • DEFLECTION ASSEMBLY
E5
(AWZ2961 : SD-P5047 SERIES)
(AWZ2960 : SD-P504 SERIES)
U8
U3
U2
U1
U5
U4
U13
U14
H.BLK
V.SIZE
DRIVE
VRM
V.GND
V.OUT
VCC3
AFC
H.GND
F.D
3V.BLK
V.GND
VIDEO
-12V
+9V
-34V
SD-P5047 SERIES ONLY
TINT
V.BLK
ABL
H.BLK
RGBOR
R
G
B
TP 41
TP-05
SHARP
R CH
L CH
VR104
VR105
Q127
Q118
Q119
Q109
VR103
VR102
Q132
Q157
Q158
Q189
Q150
IC105
Q146
Q154
Q149
Q250
Q153
IC103
VDY
L1 ⚠ R
L2 ⚠ G
L3 ⚠ B
MID-LOW RANGE
HIGH RANGE
L
MID-LOW RANGE
HIGH RANGE
R
INTERNAL SPEAKERS
R CRT DRIVE ASSEMBLY (AWZ2957)
ANP1396-A
RED
SCREEN
GND
M1→U8
M2
G CRT DRIVE ASSEMBLY (AWZ2958)
ANP1396-A
GREEN GND
SCREEN
N2
N3
N1→U8
B CRT DRIVE ASSEMBLY (AWZ2959)
ANP1396-A
GND
BLUE
P2
P3→E4
P1→U8
⚠ VR1
FOCUS VARIABLE RESISTOR
B FOCUS ADJ
G FOCUS ADJ
R FOCUS ADJ
B SCREEN ADJ
G SCREEN ADJ
R SCREEN ADJ
GND
DF
FOCUS
GND
POWER SUPPLY • DEFLECTION ASSEMBLY
POWER SUPPLY • DEFLECTION ASSEMBLY
E4
ANODE
POWER SUPPLY • DEFLECTION ASSEMBLY
EXTERNAL SPEAKERS
SPEAKER SELECTOR
AWZ-2962
SD-P5047 SERIES ONLY
SP TERMINAL ASSEMBLY
(AWZ2962 : SD-P5047-Q, SD-P5043-K, SD-P5043-Q, SD-P504-K, SD-P504-Q
(AWZ3026 : PRO-93, PRO-73)
E1
E2
POWER SUPPLY • DEFLECTION ASSEMBLY
A
B
C
D
9

Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES

This P. C. B. connection diagram is viewed from the foil side.


8
7
6
5
4
POWER SUPPLY • DEFLECTION ASSEMBLY
E5
CONVERGENCE ASSEMBLY
G5
AWZ2961 : SD-P5047 SERIES)
AWZ2960 : SD-P504 SERIES)
A
B
C
D
G CRT DRIVE ASSEMBLY (AWZ2958)
ANP1396-A
GREEN
GND
R CRT DRIVE ASSEMBLY (AWZ2957)
RED
B CRT DRIVE ASSEMBLY (AWZ2959)
BLUE
VDY
L1 R
L2 G
L3 B
VR1 FOCUS VARIABLE RESISTOR
R FOCUS ADJ
G FOCUS ADJ
B FOCUS ADJ
R SCREEN ADJ
G SCREEN ADJ
B SCREEN ADJ
GND
FOCUS
POWER SUPPLY • DEFLECTION ASSEMBLY
MID-LOW RANGE
HIGH RANGE
INTERNAL SPEAKERS
L
R
SD-P5047 SERIES ONLY
ANODE
POWER SUPPLY • DEFLECTION ASSEMBLY
E4
E1
E2
SP TERMINAL ASSEMBLY
(AWZ2962 : SD-P5047-Q, SD-P5043-K, SD-P5043-Q, SD-P504-K, SD-P504-Q
(AWZ3026 : PRO-93, PRO-73)
EXTERNAL SPEAKERS
SPEAKER SELECTOR
9


6
5
4
3
2
1
A
B
C
D
POWER SUPPLY • DEFLECTION ASSEMBLY
E5
CONVERGENCE ASSEMBLY
G5
iewed from the foil side.
VERTICAL • VIDEO • AUDIO ASSEMBLY (AWZ2961 : SD-P5047 SERIES)
(AWZ2960 : SD-P504 SERIES)
ANP1397-A
W6
①
②
③
④
VDY
L1 R
L2 G
L3 B
VR1 FOCUS VARIABLE RESISTOR
U2
U3
U8
U5
U4
U14
U13
U12
U6
U7
U11
SD-P5047 SERIES ONLY
SD-P504 SERIES ONLY
MID-LOW RANGE
HIGH RANGE
L
R
INTE SPEA
SP TERMINAL ASSEMBL
(AWZ2962 : SD-P5047-
SD-P5043-K, SD-P504
SD-P504-K, SD-P504-
(AWZ3026 : PRO-93, PR
EXTERNAL SPEAKERS
SPEAKER SELECTOR
A
B
C
D
GND
DRIVE
V.OUT
COLOR
TP-46R
TP-46B
TP-13
TP-01
TP-05
TP-41
TP-12
IC101
IC102
IC103
IC104
IC105
IC251
IC252
VR101
VR102
VR103
VR104
VR105



1
2
3
4
5
6
A
B
C
D
☆POWER SUPPLY • DEFLECTION ASSEMBLY
(AWV1146 : SD-P5047 SERIES)
(AWV1145 : SD-P504 SERIES)
MICOM • SURROUND ASSEMBLY
K1
VERTICAL • VIDEO • AUDIO ASSEMBLY
U1
VERTICAL • VIDEO • AUDIO ASSEMBLY
U6
U2
AC 120V 60Hz
FU651 8A 125V
J551
J552
J553
J554
CAUTION -FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE MENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY
6.3A 125V
FU551 1A 125V
4A 125V
HIGH VOLTAGE CAUTION
H.SIZE
E3
E2
E4
E5
E6 D.F
E7 R
E8
E9 B
E10
GND
+35V
TP552 GND
VR1 FOCUS VARIAB RESIST
FOCUS
E7
H.DY
L1 R
E8
L2 G
E9
L3 B
B CRT DRIV ASSEMBLY
P3
ANODE
FOCUS
CAUTION HIGH VOLTAGE
J501 GND
GND
FU552 4A 125V
ANP1399-B KU ONLY
GND ANODE
TO R, G, B CRT DRIVE assembly
Q653
Q655
Q652
Q651
Q654
TP551
TP552
TP553
TP651
TP652
Q656
Q657
IC651
Q672
Q660
Q659
IC652
Q658
Q661
VR593
VR592
VR591
Q662
Q664
Q551
Q552
Q666
Q663
Q561
Q665
Q563
Q562
TP557
TP556
TP555
TP554
VR651
Q572
Q573
Q661
Q571

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E Q504	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

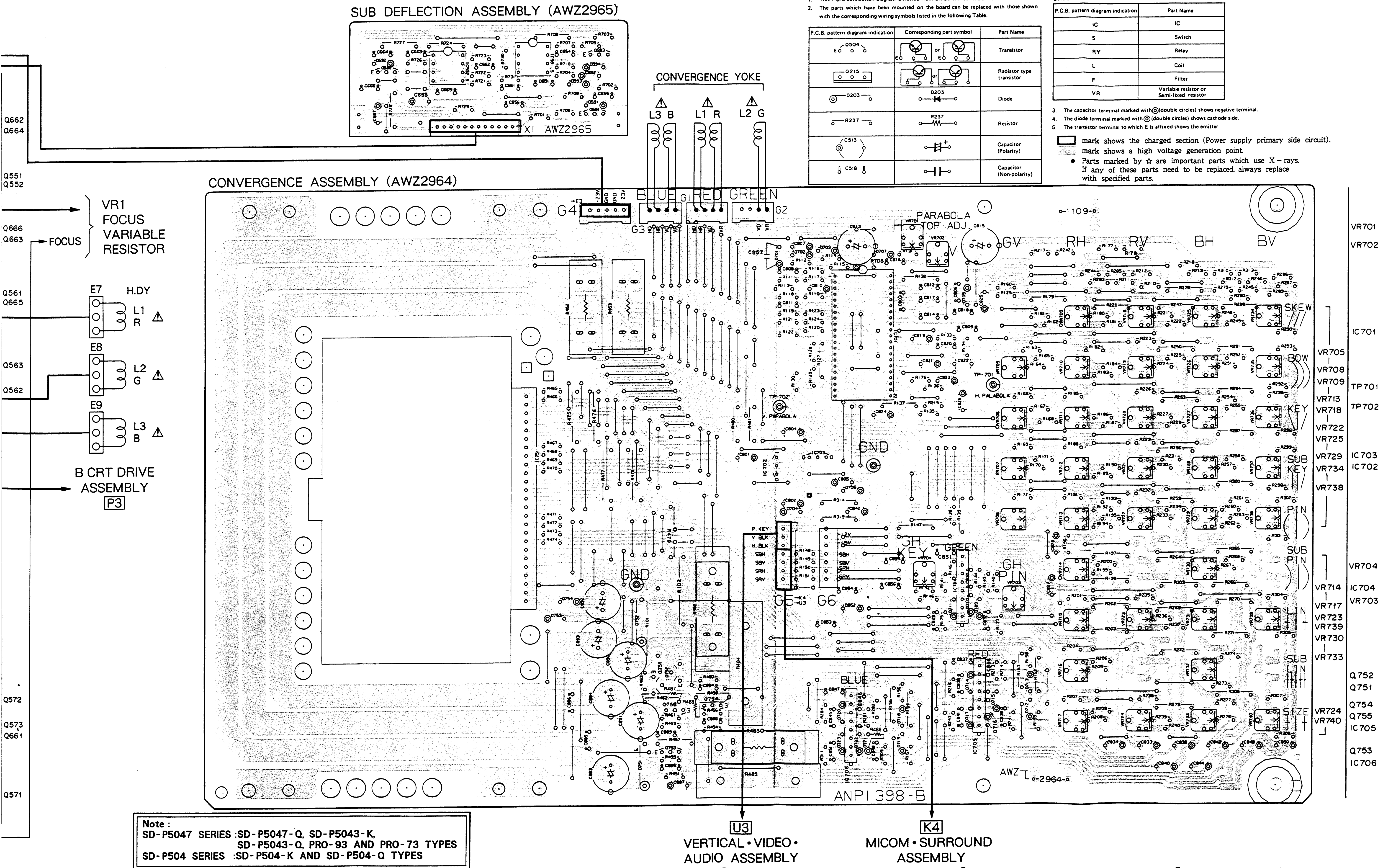
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

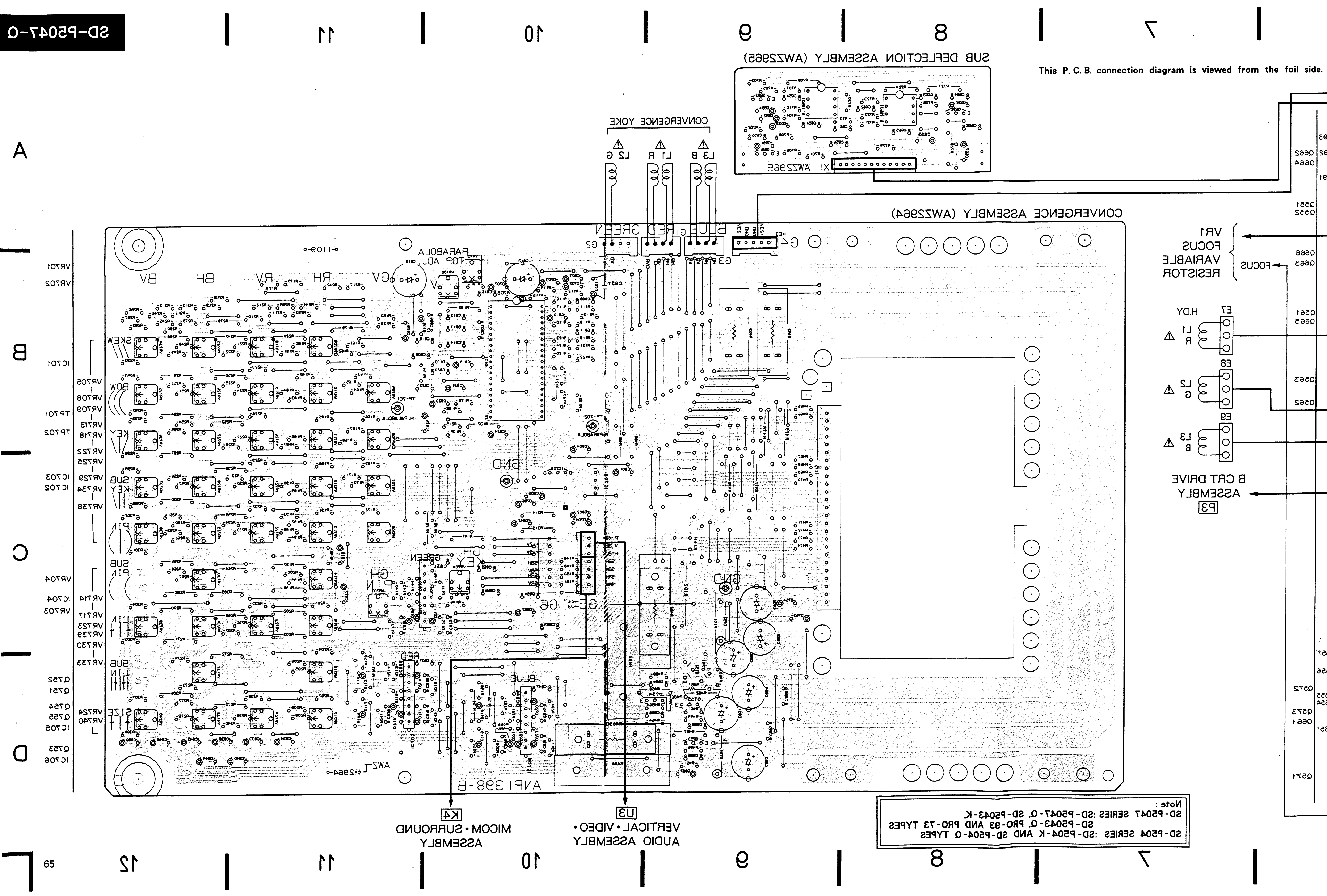
▭ mark shows the charged section (Power supply primary side circuit).
▨ mark shows a high voltage generation point.

- Parts marked by ☆ are important parts which use X - rays. If any of these parts need to be replaced, always replace with specified parts.


7
8
9
10
11
12
A
B
C
D
SUB DEFLECTION ASSEMBLY (AWZ2965)
X1 AWZ2965
CONVERGENCE YOKE
L3 B
L1 R
L2 G
CONVERGENCE ASSEMBLY (AWZ2964)
Q662
Q664
Q551
Q552
VR1
FOCUS
VARIABLE
RESISTOR
Q666
Q663
FOCUS
Q561
Q665
E7
H.DY
L1
R
Q563
E8
L2
G
Q562
E9
L3
B
B CRT DRIVE
ASSEMBLY
P3
Q572
Q573
Q661
Q571
G4
G3
BLUE
G1
RED
GREEN
G2
PARABOLA
TOP ADJ.
GV
RH
RV
BH
BV
1109
TP-701
H. PALABOLA
TP-702
V. PARABOLA
GND
IC702
IC703
P. KEY
V. BLK
H. BLK
SBH
SBV
SRH
SRV
G5
G6
K4
U3
GH
KEY
GREEN
GH
PIN
RED
BLUE
SKEW
BOW
KEY
SUB
KEY
PIN
SUB
PIN
LIN
SUB
LIN
SIZE
AWZ
2964
ANP1398-B
VR701
VR702
IC701
VR705
VR708
VR709
VR713
VR718
VR722
VR725
VR729
VR734
VR738
TP701
TP702
IC703
IC702
VR704
VR714
VR717
VR723
VR739
VR730
VR733
IC704
VR703
Q752
Q751
Q754
Q755
IC705
VR724
VR740
Q753
IC706
U3
VERTICAL • VIDEO •
AUDIO ASSEMBLY
K4
MICOM • SURROUND
ASSEMBLY

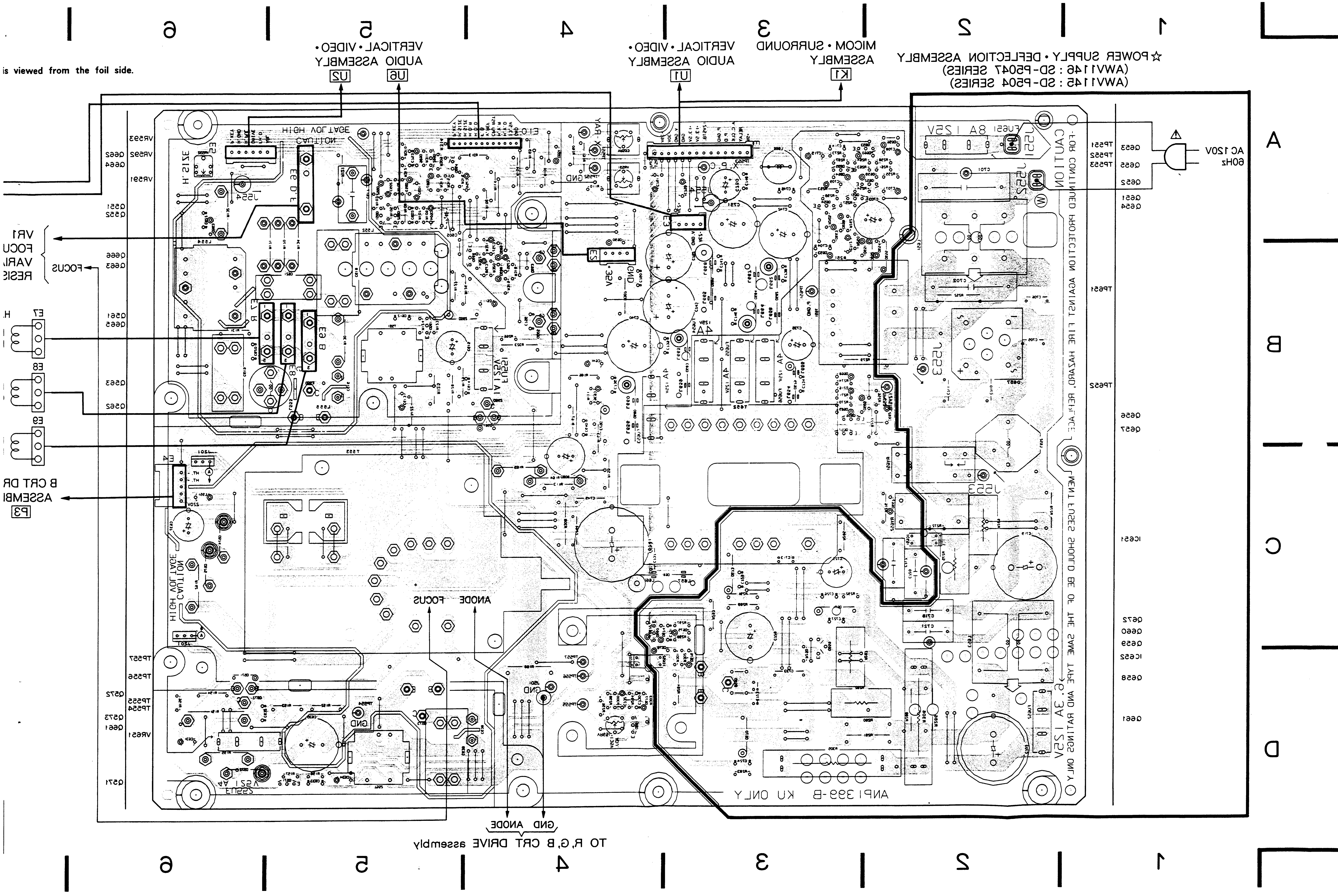
Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES

This P. C. B. connection diagram is viewed from the foil side.

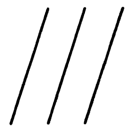
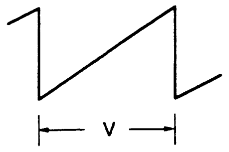
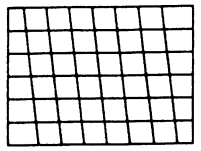
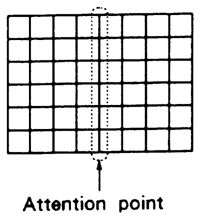
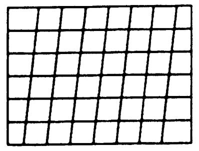
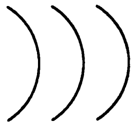
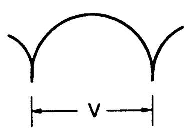
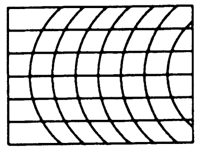
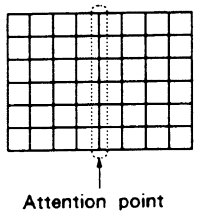
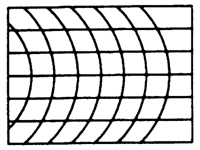
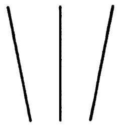
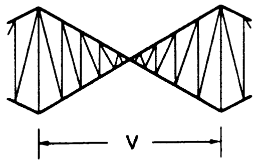
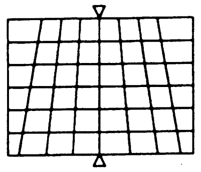
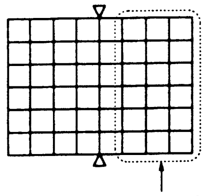
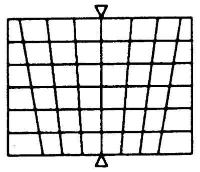
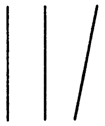
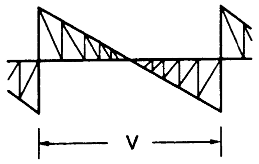
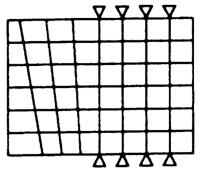
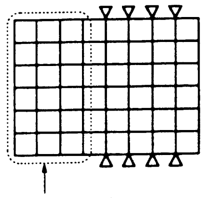
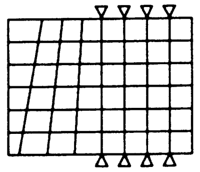
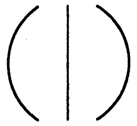
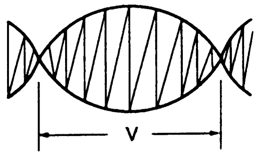
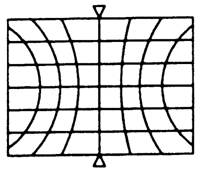
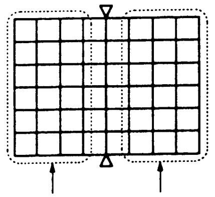
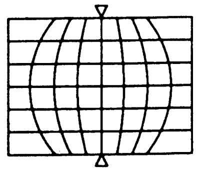
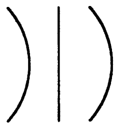
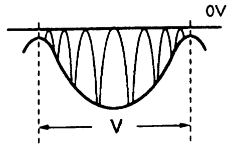
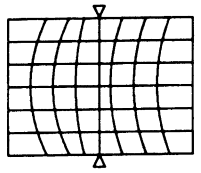
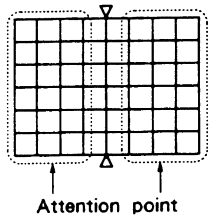
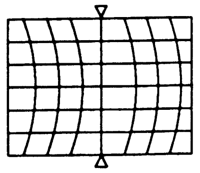

11
10
9
8
7
12
A
B
C
D
SUB DEFLECTION ASSEMBLY (AWZ2965)
AWZ2965
X1
CONVERGENCE YOKE
L2 G
L1 R
L3 B
CONVERGENCE ASSEMBLY (AWZ2964)
GREEN
RED
BLUE
G2
G3
G4
PARABOLA
TOP ADJ.
BV
BH
RV
RH
GV
SKEW
BOW
KEY
SUB KEY
PIN
SUB PIN
LIN
SUB LIN
SIZE
GND
H.PARABOLA
V.PARABOLA
GH
G5
G6
VR1
FOCUS
VARIABLE
RESISTOR
FOCUS
E7
H.DY
L1
R
E8
L2
G
E9
L3
B
B CRT DRIVE
ASSEMBLY
P3
VR701
VR702
IC701
VR705
VR708
VR709
TP701
VR713
TP702
VR718
VR722
VR725
IC703
VR729
IC702
VR734
VR738
VR704
IC704
VR714
VR703
VR717
VR723
VR739
VR730
VR733
Q752
Q751
Q754
VR724
Q755
VR740
IC705
Q753
IC706
ANP1398-B
AWZ2964
K4
MICOM • SURROUND
ASSEMBLY
U3
VERTICAL • VIDEO •
AUDIO ASSEMBLY

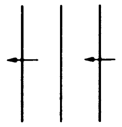
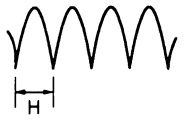
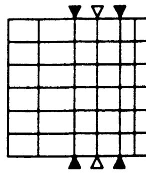
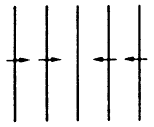
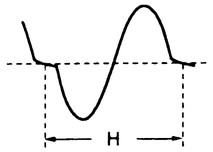
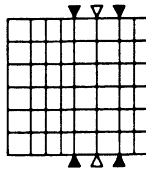
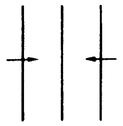
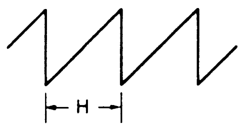
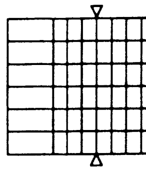
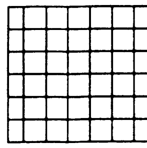
Note :
SD-P5047 SERIES :SD-P5047-Q, SD-P5043-K,
SD-P5043-Q, PRO-93 AND PRO-73 TYPES
SD-P504 SERIES :SD-P504-K AND SD-P504-Q TYPES

is viewed from the foil side.



6
5
4
3
2
1
A
B
C
D
VERTICAL • VIDEO • AUDIO ASSEMBLY
U2
U6
VERTICAL • VIDEO • AUDIO ASSEMBLY
U1
MICOM • SURROUND ASSEMBLY
K1
☆POWER SUPPLY • DEFLECTION ASSEMBLY
(AWV1146 : SD-P5047 SERIES)
(AWV1145 : SD-P504 SERIES)
AC 120V 60Hz
Q653
Q655
Q652
Q651
Q654
TP551
TP552
TP553
TP651
TP652
Q656
Q657
IC651
Q672
Q660
Q659
IC652
Q658
Q661
VR553
VR552
VR551
Q662
Q664
Q551
Q552
Q666
Q663
Q561
Q665
Q563
Q562
VR1
FOCU
VARI
RESIS
FOCUS
E7
E8
E9
H.
B CRT DR
ASSEMBL
P3
TP557
TP556
TP555
TP554
Q572
Q573
Q661
VR651
Q571
HIGH VOLTAGE CAUTION
CAUTION HIGH VOLTAGE
E5 D.F.
E6 B
E3
E2
E4
J554
J551
J552
J553
J555
L551
L552
L553
L554
T553
T551
FU551 8A 125V
FU552 6.3A 125V
4A 125V
VS21A
VS21
+35V
GND
YAR X
ANODE
FOCUS
GND
ANODE
TO R,G,B CRT DRIVE assembly
ANP1399-B KU ONLY
CAUTION - FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.

Compensation	Signal and mark ＊1	Compensating signal	Distorted screen	Corrected screen	Distorted screen	Adjustment point	
Horizontal distortion compensation	H-SKEW 	 V sawtooth wave		⇔  ⇔		Observe the vertical lines in the center of the screen (where there is no H-KEY, H-S-KEY, H-PIN nor H-S-PIN movement), then adjust the vertical lines to eliminate lean.	To obtain the best possible lines, adjust the vertical lines in the center of the screen following the adjustment procedure of H-SKEW and H-BOW.
	H-BOW 	 V parabolic wave		⇔  ⇔		Observe the vertical lines in the center of the screen, then adjust the bowed lines to straight lines.	
	H-KEY 	 V sawtooth wave × H sawtooth wave		⇔  ⇔		Observe the vertical lines in the right section of the screen (where there is no H-S-KEY movement), then adjust the vertical lines to eliminate lean.	To eliminate lean, adjust the vertical lines in the right and left sections of the screen following the adjustment procedure of H-KEY and H-S-KEY.
	H-S-KEY 	 V sawtooth wave × 1/2 H sawtooth wave		⇔  ⇔		Observe the vertical lines in the left section of the screen, then adjust the vertical lines to eliminate lean.	
	H-PIN 	 V parabolic wave × H sawtooth wave		⇔  ⇔		Observe the vertical lines in the right and left sections of the screen, then adjust the bowed lines to symmetrize the right and left by H-S-PIN. And adjust the bowed vertical lines in the right and left sections of the screen to straight lines by H-PIN.	To eliminate distortion, straighten the vertical lines in the right and left sections of the screen following the adjustment procedure of H-PIN and H-S-PIN.
	H-S-PIN 	 V parabolic wave × H parabolic wave		⇔  ⇔			

Compensation	Signal and mark ＊1	Compensating signal	Distorted scr
Horizontal interval compensation	H-LIN 	 H parabolic wave	
	H-S-LIN 	 H sine wave	
	H-SIZE 	 H sawtooth wave	
	H-POSITION	DC voltage	

Note : KEY is short
and LIN for L
▽ : denotes p
▼ : denotes p
＊1 : Sketch is print

Fig. 9-4 Horizontal compensation

8. P. C. B's PARTS LIST

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5 %, and K = 10 %).

$560\,\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ ··················· RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
$47\text{k}\,\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ ··················· RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
$0.5\,\Omega \rightarrow 0\text{R}5$ ··················· RN2H$\boxed{0}\boxed{R}\boxed{5}$K
$1\,\Omega \rightarrow 010$ ··················· RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62\text{k}\,\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ ··················· RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

- Parts marked by ☆ are important parts which use X-rays. If any of these parts need to be replaced, always replace with specified parts.
- Parts marked by × are important parts which use X-rays. If a failure occurs in any of these parts, replace the printed circuit board assembly where the relevant part has already been adjusted as a working component. Do not replace the actual part itself. If any part marked by × is replaced, there is danger of being exposed to X-rays.

PINP assembly (AWZ2954)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC931		TMS4461-12NL
	IC932		TC4094BP
	IC933		TC4069UBP
	IC934	P-IN-P CONTROLLER IC	TMC3499PJ
	IC935	P-IN-P CHROMA DECODE	HA11532NT
	IC936, 937		TC4066BP
	IC938		NJM2217L
	IC939		HA11525NT
	IC940		UPC78M05H
	Q931	TRANSISTOR	2SA933S
	Q932	TRANSISTOR	2SC1740S
	Q933	TRANSISTOR	2SA933S
	Q934, 935	TRANSISTOR	2SC1740S
	Q938-940	TRANSISTOR	2SC1740S
	Q941	TRANSISTOR	2SA933S
	Q942-947	TRANSISTOR	2SC1740S
	Q951	TRANSISTOR	2SA933S
	Q952	TRANSISTOR	2SC1740S
	Q953	TRANSISTOR	2SA933S
	Q954, 955	TRANSISTOR	2SC1740S
	Q956	TRANSISTOR	2SA933S
	Q965-969	TRANSISTOR	2SC1740S
	Q970	TRANSISTOR	2SA933S
	Q971	TRANSISTOR	2SC1740S
	Q972, 973	TRANSISTOR	2SA933S
	D932-935	DIODE	1SS252

COILS

Mark	NO	Description	Part NO.
	L931	AXIAL INDUCTOR	LAU100K
	L933, 934	AXIAL INDUCTOR	LAU221K
	L938	AXIAL INDUCTOR	LAU330K
	L939	AXIAL INDUCTOR	LAU5R6K
	L940	AXIAL INDUCTOR	LAU820K
	L941	AXIAL INDUCTOR	LAU560K
	L943	AXIAL INDUCTOR	LAU470K
	L944-947	AXIAL INDUCTOR	LAU100K
	L950	AXIAL INDUCTOR	LAU100K
	L951	AXIAL INDUCTOR	LAU470K
	L952	COIL(1000μH)	ATH1046
	L953		LAUR22M

CAPACITORS

Mark	NO	Description	Part NO.
	TC931-933	CERAMIC TRIMMER	ACM-023
	C101	ELECTR. CAPACITOR	CEAS100M50
	C103-110	CERAMIC CAPACITOR	CKDYF473Z50
	C111	CERAMIC CAPACITOR	CCCCH680J50
	C114	ELECTR. CAPACITOR	CEAS4R7M50
	C115	CERAMIC CAPACITOR	CKDYF473Z50
	C116	ELECTR. CAPACITOR	CEAS010M50
	C117	CERAMIC CAPACITOR	CCDUJ560J50
	C118	CERAMIC CAPACITOR	CCCSL820J50
	C121	CERAMIC CAPACITOR	CCCSL271J50
	C122	CERAMIC CAPACITOR	CCCSL181J50
	C123	CERAMIC CAPACITOR	CCDUJ270J50
	C125	MYLOR FILM CAPACITOR	CQMA182J50
	C126	ELECTR. CAPACITOR	CEAS010M50
	C127	ELECTR. CAPACITOR	CEASR47M50
	C128	CERAMIC CAPACITOR	CKDYB222K50
	C129, 130	CERAMIC CAPACITOR	CKDYF473Z50
	C131	CERAMIC CAPACITOR	CKDYB102K50
	C132	CERAMIC CAPACITOR	CKDYF473Z50
	C133	CERAMIC CAPACITOR	CCCSL150J50
	C134	CERAMIC CAPACITOR	CKDYF473Z50
	C135	MYLOR FILM CAPACITOR	CQMA333J50
	C136	CERAMIC CAPACITOR	CKDYF473Z50
	C138-141	CERAMIC CAPACITOR	CKDYF473Z50
	C142	CERAMIC CAPACITOR	CKDYF103Z50
	C144	CERAMIC CAPACITOR	CKDYF473Z50
	C145	ELECTR. CAPACITOR	CEAS4R7M50
	C146	CERAMIC CAPACITOR	CKDYF223Z50
	C147	ELECTR. CAPACITOR	CEAS010M50
	C148	CERAMIC CAPACITOR	CCCCH100D50

Mark	NO	Description	Part NO.
	C149	ELECTR. CAPACITOR	CEAS0R1M50
	C150	CERAMIC CAPACITOR	CKDYB332K50
	C151	CERAMIC CAPACITOR	CCCSL330J50
	C152	CERAMIC CAPACITOR	CKCYB331K50
	C153	CERAMIC CAPACITOR	CCCSL390J50
	C154	CERAMIC CAPACITOR	CCCCH390J50
	C156	CERAMIC CAPACITOR	CCCSL470J50
	C162	CERAMIC CAPACITOR	CKDYF103Z50
	C163	CERAMIC CAPACITOR	CCCCH101J50
	C164	ELECTR. CAPACITOR	CEAS0R1M50
	C165	CERAMIC CAPACITOR	CCCCH220J50
	C166	ELECTR. CAPACITOR	CEAS221M10
	C167	ELECTR. CAPACITOR	CEAS010M50
	C168	CERAMIC CAPACITOR	CKDYF103Z50
	C169	MYLOR FILM CAPACITOR	CQMA152J50
	C170	CERAMIC CAPACITOR	CCCSL470J50
	C171	MYLOR FILM CAPACITOR	CQMA333J50
	C173	ELECTR. CAPACITOR	CEAS2R2M50
	C174	CERAMIC CAPACITOR	CKDYF473Z50
	C176	ELECTR. CAPACITOR	CEAS4R7M50
	C177	CERAMIC CAPACITOR	CKDYB102K50
	C178	ELECTR. CAPACITOR	CEAS101M10
	C179	CERAMIC CAPACITOR	CKDYF473Z50
	C180	ELECTR. CAPACITOR	CEASR22M50
	C181	ELECTR. CAPACITOR	CEAS2R2M50
	C182	CERAMIC CAPACITOR	CKCYX333M25
	C184	ELECTR. CAPACITOR	CEAS2R2M50
	C185	CERAMIC CAPACITOR	CKDYB102K50
	C186	CERAMIC CAPACITOR	CCCCH100D50
	C187	ELECTR. CAPACITOR	CEAS221M16
	C188	CERAMIC CAPACITOR	CCCCH680J50
	C189	CERAMIC CAPACITOR	CKCYX104M25
	C190	ELECTR. CAPACITOR	CEAS100M50
	C191	CERAMIC CAPACITOR	CCCSL150J50
	C192	ELECTR. CAPACITOR	CEAS221M10
	C193	CERAMIC CAPACITOR	CKCYX104M25
	C194	ELECTR. CAPACITOR	CEAS221M10
	C195	ELECTR. CAPACITOR	CEAS010M50
	C196	CERAMIC CAPACITOR	CKCYX104M25
	C197	CERAMIC CAPACITOR	CKDYF103Z50
	C198	ELECTR. CAPACITOR	CEAS221M10
	C199	CERAMIC CAPACITOR	CKDYB102K50
	C200	ELECTR. CAPACITOR	CEAS101M10
	C201	CERAMIC CAPACITOR	CKDYF103Z50
	C202	CERAMIC CAPACITOR	CKDYF473Z50
	C203	CERAMIC CAPACITOR	CKDYF103Z50
	C204	ELECTR. CAPACITOR	CEAS221M16
	C205	CERAMIC CAPACITOR	CCCCH680J50
	C206	CERAMIC CAPACITOR	CKDYB102K50
	C207	ELECTR. CAPACITOR	CEAS470M10
	C209	CERAMIC CAPACITOR	CKDYF473Z50
	C210	ELECTR. CAPACITOR	CEAS221M10
	C211	CERAMIC CAPACITOR	CKDYB103K50
	C212	ELECTR. CAPACITOR	CEAS220M25
	C218	CERAMIC CAPACITOR	CKDYB103K50
	C219	CERAMIC CAPACITOR	CKCYB681K50
	C220	ELECTROLYTIC CAPACIT	CEAS102M6
	C221	ELECTR. CAPACITOR	CEAS220M25
	C222	ELECTR. CAPACITOR	CEAS330M16
	C223	ELECTR. CAPACITOR	CEAS101M10
	C225	CERAMIC CAPACITOR	CCCSL470J50
	C226	CERAMIC CAPACITOR	CCCSL101J50
	C227, 228	MYLOR FILM CAPACITOR	CQMA103J50
	C229-231	ELECTR. CAPACITOR	CEAS010M50
	C232	ELECTR. CAPACITOR	CEAS0R1M50
	C233	ELECTR. CAPACITOR	CEAS220M25
	C234	CERAMIC CAPACITOR	CKDYX473M25
	C235	CERAMIC CAPACITOR	CCCSL220J50
	C237	CERAMIC CAPACITOR	CCDSL470J50
	C238	CERAMIC CAPACITOR	CCDUJ390J50

RESISTORS

Mark	NO	Description	Part NO.
	VR931	VR (220Ω)	ACP1038
	VR933	VR (2.2kΩ)	ACP1041
	VR934	VR (22kΩ)	ACP1044
	VR935	VR (1kΩ)	ACP1040
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	NO	Description	Part NO.
	DL931	DELAY LINE	ATN1022
	X931	CERAMIC RESONATOR (503.5kHz)	ASS1032
	X932, 933	CRYSTAL RESONATOR (3.579545MHz)	ASS-028
	X934	CERAMIC RESONATOR (503.5kHz)	ASS1032

PINP SUB Assembly (AWZ3025)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	Q957	N-FET	2SK117
	Q959	TRANSISTOR	2SA933S
	Q960-963	TRANSISTOR	2SC1740S

COILS

Mark	NO	Description	Part NO.
	L936, 937	AXIAL INDUCTOR	LAU221K

CAPACITORS

Mark	NO	Description	Part NO.
	C112, 113	ELECTR. CAPACITOR	CEAS010M50
	C160, 161	CERAMIC CAPACITOR	CKDYB332K50
	C214	CERAMIC CAPACITOR	CCCSL221J50
	C215	CERAMIC CAPACITOR	CCCCH220J50
	C216, 217	CERAMIC CAPACITOR	CCCSL101J50
	C224	ELECTR. CAPACITOR	CEAS470M10

RESISTORS

Mark	NO	Description	Part NO.
		All resistors	RD1/8PM□□□J

R. CRT DRIVE Assembly (AWZ2957)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	Q801	TRANSISTOR	2SC2278
	D801	DIODE	1SS252

COILS

Mark	NO	Description	Part NO.
	L801, 802	AXIAL INDUCTOR	LAU470K
	L803	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	NO	Description	Part NO.
	C921	ELECTR. CAPACITOR	CEAS101M16
	C922	CERAMIC CAPACITOR	CKCYB681K50
	C923	ELECTR. (4.7µ/250V)	ACH-378
	C924	CERAMIC (1000p/2kV)	ACG1001

RESISTORS

Mark	NO	Description	Part NO.
	R751	CARBONFILM RESISTOR	RD1/8PM103J
	R752	RESISTOR(1K, 1/2W)	ACN1006
	R753, 754	METAL OXIDE RESISTOR	RS3LMF332J
	R755	RESISTOR(47, 1/2W)	ACN-225

OTHERS

Mark	NO	Description	Part NO.
		CRT SOCKET	AKG1004

G. CRT DRIVE Assembly (AWZ2958)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	Q821	TRANSISTOR	2SC2278
	D821	DIODE	1SS252

COILS

Mark	NO	Description	Part NO.
	L821, 822	AXIAL INDUCTOR	LAU470K
	L823	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	NO	Description	Part NO.
	C931	ELECTR. CAPACITOR	CEAS101M16
	C932	CERAMIC CAPACITOR	CKCYB681K50
	C933	ELECTR. (4.7µ/250V)	ACH-378
	C934	CERAMIC (1000p/2kV)	ACG1001

RESISTORS

Mark	NO	Description	Part NO.
	R761	CARBONFILM RESISTOR	RD1/8PM103J
	R762	RESISTOR(1K, 1/2W)	ACN1006
	R763, 764	METAL OXIDE RESISTOR	RS3LMF332J
	R765	RESISTOR(47, 1/2W)	ACN-225

OTHERS

Mark	NO	Description	Part NO.
		CRT SOCKET	AKG1004

B. CRT DRIVE Assembly (AWZ2959)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	Q841	TRANSISTOR	2SC2278
	D841	DIODE	1SS252

COILS

Mark	NO	Description	Part NO.
	L841, 842	AXIAL INDUCTOR	LAU470K
	L843	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	NO	Description	Part NO.
	C941	ELECTR. CAPACITOR	CEAS101M16
	C942	CERAMIC CAPACITOR	CKCYB681K50
	C943	ELECTR. (4.7µ/250V)	ACH-378
	C944	CERAMIC (1000p/2kV)	ACG1001

RESISTORS

Mark	NO	Description	Part NO.
	R771	CARBONFILM RESISTOR	RD1/8PM103J
	R772	RESISTOR(1K, 1/2W)	ACN1006
	R773, 774	METAL OXIDE RESISTOR	RS3LMF332J
	R775	RESISTOR(47, 1/2W)	ACN-225

OTHERS

Mark	NO	Description	Part NO.
		CRT SOCKET	AKG1004

VERTICAL · VIDEO · AUDIO Assembly (AWZ2961)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	TH101	THERMISTOR (100Ω)	TH101-2
	IC101		TC4011BP
	IC102		TC4066BP
	IC103		NJM78M09A
	IC104		PA0030
	IC105		AN5302K
	IC251		TA7630P
	IC252		TA8200AH
	Q101, 103	TRANSISTOR	2SA933S
	Q104-107	TRANSISTOR	2SC1740S
	Q108	TRANSISTOR	2SA933S
	Q109, 111	TRANSISTOR	2SC1740S
	Q112-118	TRANSISTOR	2SA933S
	Q119-121	TRANSISTOR	2SC1740S
	Q122, 123	TRANSISTOR	2SA933S
	Q124	TRANSISTOR	2SC1740S
	Q125, 126	TRANSISTOR	2SA933S
	Q127	TRANSISTOR	2SC1740S
	Q128, 129	TRANSISTOR	2SA933S
	Q130-132	TRANSISTOR	2SC1740S
	Q133-135	TRANSISTOR	2SA933S
	Q136, 137	TRANSISTOR	2SC1740S
	Q138	TRANSISTOR	2SA933S
	Q139-141	TRANSISTOR	2SC1740S
	Q142	TRANSISTOR	2SA933S
	Q143, 144	TRANSISTOR	2SC1740S
	Q145	TRANSISTOR	2SA933S
	Q146	TRANSISTOR	2SC1845
	Q147	TRANSISTOR	2SA933S
	Q148	TRANSISTOR	2SC1740S
	Q149	TRANSISTOR	2SD1276A
	Q150	TRANSISTOR	2SB950A
	Q151-155	TRANSISTOR	2SC1740S
	Q156-158	TRANSISTOR	2SA933S
	Q159	TRANSISTOR	2SC1740S
	Q160	TRANSISTOR	2SA933S
	Q161	TRANSISTOR	2SC1740S
	Q162	TRANSISTOR	2SA933S
	Q163-166	N-FET	2SK246
	Q167-169	TRANSISTOR	2SA933S
	Q170, 171	N-FET	2SK246
	Q173, 174	TRANSISTOR	2SA933S
	Q178, 180	TRANSISTOR	2SA933S
	Q182-186	TRANSISTOR	2SA933S
	Q187-189	TRANSISTOR	2SC1740S
	Q190	TRANSISTOR	2SA933S
	Q191, 192	TRANSISTOR	2SC1740S
	Q193	TRANSISTOR	2SA933S
	Q194	TRANSISTOR	2SC1740S
	Q230-232	TRANSISTOR	2SC1740S

Mark	NO	Description	Part NO.
	Q249,250	TRANSISTOR	2SA933S
	Q251,252	TRANSISTOR	2SC1740S
	Q253,254	TRANSISTOR	2SC3327
	Q255	TRANSISTOR	2SA933S
	Q256	TRANSISTOR	2SC1740S
	D102-109	DIODE	1SS252
	D111-114	DIODE	1SS252
	D115	DIODE	11E2
	D116	DIODE	1SS252
	D118-131	DIODE	1SS252
	D132,133	DIODE	OA90A
	D134	DIODE	1SS252
	D135,136	DIODE	OA90A
	D137	DIODE	1SS252
	D138,139	DIODE	OA90A
	D140	DIODE	1SS252
	D141-143	DIODE	11E2
	D144-146	DIODE	1SS252
	D150-152	DIODE	1SS252
	D153	ZENER DIODE	RD3.6ESB2
	D154		1SS252
	D247-250	DIODE	1SS252
	D251,252	ZENER DIODE	RD6.8ESB2
	D253-262	DIODE	1SS252
	D263	DIODE	11E2
	D273,274	DIODE	1SS252

COILS

Mark	NO	Description	Part NO.
	L101	AXIAL INDUCTOR	LAU150K
	L102	AXIAL INDUCTOR	LAU820K
	L103	AXIAL INDUCTOR	LAU100K
	L104	AXIAL INDUCTOR	LAU4R7K
	L105,106	AXIAL INDUCTOR	LAU150K
	L107	AXIAL INDUCTOR	LAU680K
	L108	COIL	ATG1006
	L110	AXIAL INDUCTOR	LAU3R9K
	L111	AXIAL INDUCTOR	LAU1R8M
	L112	AXIAL INDUCTOR	LAU3R9K
	L113	AXIAL INDUCTOR	LAU1R8M
	L114	AXIAL INDUCTOR	LAU680K
	L116-118	AXIAL INDUCTOR	LAU4R7K
	L251,252	COIL (1μH)	ATH-133

CAPACITORS

Mark	NO	Description	Part NO.
	C102	ELECTR. CAPACITOR	CEANPR22M50
	C103	CERAMIC CAPACITOR	CKCYB103K50
	C104	ELECTR. CAPACITOR	CEAS100M50
	C105	CERAMIC CAPACITOR	CCCSL820J50
	C106	CERAMIC CAPACITOR	CKCYB102K50
	C107	ELECTR. CAPACITOR	CEAS010M50
	C109	CERAMIC CAPACITOR	CCCCH151J50
	C110	CERAMIC CAPACITOR	CCDUJ220J50
	C111	ELECTR. CAPACITOR	CEAS100M50
	C112	ELECTR. CAPACITOR	CEAS470M16
	C113	CERAMIC CAPACITOR	CCCCH151J50
	C115	CERAMIC CAPACITOR	CCDSL390J50
	C116	ELECTR. CAPACITOR	CEAS101M10
	C118	ELECTR. CAPACITOR	CEANP010M50
	C119	ELECTR. CAPACITOR	CEAS100M50

Mark	NO	Description	Part NO.
	C120	CERAMIC CAPACITOR	CCCSL470J50
	C121	CERAMIC CAPACITOR	CCCSL390J50
	C122	CERAMIC CAPACITOR	CCCSL220J50
	C123	ELECTR. CAPACITOR	CEAS010M50
	C124	MYLOR FILM CAPACITOR	CQMA223J50
	C125	ELECTR. CAPACITOR	CEAS101M10
	C126	CERAMIC CAPACITOR	CCCSL151J50
	C127	CERAMIC CAPACITOR	CKCYB102K50
	C128	CERAMIC CAPACITOR	CCCSL151J50
	C129	MYLOR FILM CAPACITOR	CQMA103J50
	C130,131	ELECTR. CAPACITOR	CEAS330M16
	C132	ELECTROLYTIC CAPACIT	CEANP100M16
	C134	CERAMIC CAPACITOR	CKCYB103K50
	C135	ELECTR. CAPACITOR	CEAS010M50
	C136	MYLOR FILM CAPACITOR	CQMA183J50
	C137	CERAMIC CAPACITOR	CKDYF473Z50
	C139	CERAMIC CAPACITOR	CKDYX104M25
	C140	CERAMIC CAPACITOR	CCCSL121J50
	C141	CERAMIC CAPACITOR	CKCYB103K50
	C142	ELECTR. CAPACITOR	CEAS100M50
	C143	CERAMIC CAPACITOR	CKCYB391K50
	C144	MYLOR FILM CAPACITOR	CQMA182J50
	C145	MYLOR FILM CAPACITOR	CQMA683J50
	C146	ELECTR. CAPACITOR	CEAS330M16
	C147	CERAMIC CAPACITOR	CKCYF473Z50
	C148	ELECTR. CAPACITOR	CEAS102M16
	C149	CERAMIC CAPACITOR	CKCYB391K50
	C150,151	CERAMIC CAPACITOR	CKDYF473Z50
	C152	CERAMIC CAPACITOR	CKCYB103K50
	C153	ELECTROLYTIC CAPACIT	CEAS471M35
	C154	CERAMIC CAPACITOR	CKDYF473Z50
	C155	ELECTR. CAPACITOR	CEAS101M16
	C156,157	ELECTR. CAPACITOR	CEAS330M16
	C158	CERAMIC CAPACITOR	CKDYB561K50
	C159	CERAMIC CAPACITOR	CKCYB103K50
	C160	CERAMIC CAPACITOR	CKDYF103Z50
	C161	ELECTR. CAPACITOR	CEAS220M16
	C162	CERAMIC CAPACITOR	CKDYF473Z50
	C163	CERAMIC CAPACITOR	CCDSL101J50
	C164	CERAMIC CAPACITOR	CCCSL271J50
	C165	ELECTR. CAPACITOR	CEAS101M10
	C166	CERAMIC CAPACITOR	CCDSL101J50
	C167	ELECTR. CAPACITOR	CEAS010M50
	C168	CERAMIC CAPACITOR	CCCSL271J50
	C169	ELECTR. CAPACITOR	CEAS010M50
	C170	TANTALUM (2.2μ/16V)	ACH1131
	C171	ELECTR. CAPACITOR	CEAS330M16
	C172	ELECTR. CAPACITOR	CEAS010M50
	C173	MYLOR FILM CAPACITOR	CQMA123J50
	C174,175	ELECTR. CAPACITOR	CEAS330M16
	C176	ELECTR. CAPACITOR	CEAS010M50
	C177	CERAMIC CAPACITOR	CKCYF473Z50
	C178	CERAMIC CAPACITOR	CCCSL180J50
	C179	CERAMIC CAPACITOR	CCCSL101J50
	C180	ELECTR. CAPACITOR	CEASR47M50

Mark	NO	Description	Part NO.
	C181	CERAMIC CAPACITOR	CKDYF473Z50
	C182	ELECTR. CAPACITOR	CEAS470M16
	C183	CERAMIC CAPACITOR	CKDYF103Z50
	C184	ELECTR. CAPACITOR	CEAS2R2M50
	C185	CERAMIC CAPACITOR	CKCYF473Z50
	C186	MYLOR FILM CAPACITOR	CQMA333J50
	C187	ELECTR. CAPACITOR	CEANP2R2M50
	C188	ELECTR. CAPACITOR	CEAS4R7M50
	C189	CERAMIC CAPACITOR	CKCYB103K50
	C190	ELECTR. CAPACITOR	CEAS101M16
	C191	MYLOR FILM CAPACITOR	CQMA473J50
	C192	ELECTR. (0.82μ/50V)	ACH-388
	C193	CERAMIC CAPACITOR	CKDYF473Z50
	C194	ELECTR. CAPACITOR	CEAS471M10
	C195	CERAMIC CAPACITOR	CKDYF473Z50
	C196	ELECTR. CAPACITOR	CEAS330M16
	C197	CERAMIC CAPACITOR	CCCCH100D50
	C198	ELECTR. CAPACITOR	CEAS101M10
	C199	MYLOR FILM CAPACITOR	CQMA223J50
	C200	ELECTR. CAPACITOR	CEAS100M50
	C201	CERAMIC CAPACITOR	CCDCH221J50
	C202	ELECTR. CAPACITOR	CEAS010M50
	C203	CERAMIC CAPACITOR	CCCSL390J50
	C204	ELECTR. CAPACITOR	CEAS010M50
	C205	CERAMIC CAPACITOR	CCCSL680J50
	C206	ELECTR. CAPACITOR	CEAS010M50
	C208, 209	ELECTR. CAPACITOR	CEAS222M16
	C210	CERAMIC CAPACITOR	CKCYF473Z50
	C211	ELECTR. CAPACITOR	CEAS221M16
	C212	ELECTR. CAPACITOR	CEAS101M16
	C214, 215	CERAMIC CAPACITOR	CCCSL470J50
	C216	ELECTR. CAPACITOR	CEANP010M50
	C217	CERAMIC CAPACITOR	CCCSL470J50
	C218, 219	ELECTR. CAPACITOR	CEANP010M50
	C220	ELECTR. CAPACITOR	CEAS100M50
	C221	CERAMIC CAPACITOR	CCCSL101J50
	C222	CERAMIC CAPACITOR	CCCSL221J50
	C223, 224	CERAMIC CAPACITOR	CKCYB391K50
	C225	CERAMIC CAPACITOR	CCCSL121J50
	C226	CERAMIC CAPACITOR	CKCYB561K50
	C227	CERAMIC CAPACITOR	CKCYB331K50
	C229-231	CERAMIC CAPACITOR	CCCSL151J50
	C232	ELECTR. CAPACITOR	CEAS101M16
	C233, 235	ELECTR. CAPACITOR	CEAS330M16
	C240	ELECTR. CAPACITOR	CEAS3R3M50
	C242, 243	ELECTR. CAPACITOR	CEAS331M16
	C244, 245	CERAMIC CAPACITOR	CCDUJ331J50
	C255	ELECTR. CAPACITOR	CEAS220M25
	C256	ELECTR. CAPACITOR	CEANP2R2M50
	C257	ELECTR. CAPACITOR	CEAS100M50
	C258	CERAMIC CAPACITOR	CCDSL221J50
	C259, 260	ELECTR. CAPACITOR	CEAS100M50
	C261, 262	AUDIO FILM CAPACITOR	CFTXA154J50
	C263, 264	CERAMIC CAPACITOR	CKCYB562K50
	C265, 266	AUDIO FILM CAPACITOR	CFTXA124J50
	C267	ELECTR. CAPACITOR	CEAS100M50
	C268	ELECTR. CAPACITOR	CEAS470M10
	C269, 270	ELECTR. CAPACITOR	CEAS100M50
	C271	CERAMIC CAPACITOR	CKDYF103Z50
	C272	ELECTR. CAPACITOR	CEAS470M10
	C273, 274	CERAMIC CAPACITOR	CKMYB561K50
	C275, 276	ELECTR. CAPACITOR	CEAS2R2M50
	C277, 278	ELECTR. CAPACITOR	CEAS330M25
	C279	CERAMIC CAPACITOR	CKDYF473Z50
	C280	ELECTR. CAPACITOR	CEAS470M50
	C281	CERAMIC CAPACITOR	CKDYF473Z50
	C282	AUDIO FILM CAPACITOR	CFTXA124J50
	C283	CERAMIC CAPACITOR	CKDYF473Z50
	C284	ELECTR. CAPACITOR	CEAS471M50
	C285	AUDIO FILM CAPACITOR	CFTXA124J50
	C286, 287	ELECTR. CAPACITOR	CEAS222M35
	C288, 289	ELECTR. CAPACITOR	CEAS010M50
	C291	ELECTR. CAPACITOR	CEAS470M10
	C292	ELECTR. CAPACITOR	CEAS222M16
	C297	CERAMIC CAPACITOR	CKDYF473Z50
	C300, 301	ELECTROLYTIC (3.3μ/63V)	ACH1127
	C302	ELECTR. CAPACITOR	CEAS470M10
	C303	ELECTR. CAPACITOR	CEAS010M50
	C304	CERAMIC CAPACITOR	CKDYF473Z50
	C305, 306	ELECTR. CAPACITOR	CEAS2R2M50
	C309	ELECTR. CAPACITOR	CEAS470M50

RESISTORS

	VR101	VR (1kΩ)	ACP1022
	VR102	VR (2.2kΩ)	ACP1023
	VR103, 104	VR (100Ω)	ACP1031
	VR105	VR (220Ω)	ACP1021
	R236, 245	METAL OXIDE RESISTOR	RS2LMF□□□J
	R268, 269	METAL OXIDE RESISTOR	RS2LMF010J
	R292	CARBON FILM RESISTOR	RD1/4PMFL223J
	R334	METAL OXIDE RESISTOR	RS2LMF010J
	R434	CARBONFILM RESISTOR	RD1/2PM271J
	R437, 438	CARBONFILM RESISTOR	RD1/2PM271J
	R444-446	CARBONFILM RESISTOR	RD1/2PM101J
	R464	CARBON FILM RESISTOR	RD1/4PMFL470J
	R467	CARBONFILM RESISTOR	RD1/2PMFL3R9J
	R701, 702	CARBONFILM RESISTOR	RD1/4PMFL2R2J
	R773, 774	CARBONFILM RESISTOR	RD1/2PM152J
	R795-797	CARBONFILM RESISTOR	RD1/4PMFL□□□J
	Other resistors		RD1/8PM□□□J

OTHERS

	DL101	GLASS DELAY LINE	ATN1011
	DL109	DELAY LINE	ATN1013
	DL115	DELAY LINE	ATN1014
	X101	CRYSTAL RESONATOR (3.579545MHz)	ASS-028
	X102	CERAMIC RESONATOR (503.5kHz)	ASS1033

SP TERMINAL Assembly (AWZ2962)

SWITCH

Mark	NO	Description	Part NO.
	S251	SLIDE SWITCH (SPEAKER SELECTOR)	ASH1001

RESISTORS

Mark	NO	Description	Part NO.
	R783-786	CARBONFILM RESISTOR	RD1/8PM□□□J

OTHERS

Mark	NO	Description	Part NO.
		PHONO JACK 2-P	AKB1126
		SPEAKER TERMINAL 4-P	AKE1021

CONVERGENCE Assembly (AWZ2964)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC701		PA0036
	IC702		UPC78L12J
	IC703		NJM79L15A
	IC704-706		M5238LF
	IC751		STK4277-SL
	Q751	TRANSISTOR	2SD1277A
	Q752	TRANSISTOR	2SB951A
	Q753, 754	TRANSISTOR	2SC1740S
	Q755	TRANSISTOR	2SA933S
	D701	ZENER DIODE	RD8. 2ESB2
	D702-704	DIODE	1SS252
	D705	ZENER DIODE	RD5. 1ESB
	D706	DIODE	1SS252
	D707	ZENER DIODE	HZS12BL
	D708	ZENER DIODE	RD5. 1ESB
	D709-723	ZENER DIODE	UZ-27BSB
	D751, 752	DIODE	11DF1FD
	D753, 754	DIODE	1SS252

CAPACITORS

Mark	NO	Description	Part NO.
	C801	ELECTR. CAPACITOR	CEASR33M50
	C802	ELECTR. CAPACITOR	CEAS010M50
	C803	CERAMIC CAPACITOR	CKDYF473Z50
	C804	ELECTR. CAPACITOR	CEASR33M50
	C805	ELECTR. CAPACITOR	CEAS010M50
	C806	PL. STYRENE CAPACITOR	CQSA152J50
	C807	ELECTR. CAPACITOR	CEAS010M50
	C808	MYLOR FILM CAPACITOR	CQMA681J50
	C809	PL. STYRENE CAPACITOR	CQSA102J50
	C810	ELECTR. CAPACITOR	CEAS100M50
	C811	MYLOR FILM CAPACITOR	CQMA224J50
	C812	CERAMIC CAPACITOR	CKDYF473Z50
	C813	ELECTROLYTIC CAPACIT	CEAS102M6
	C814	CERAMIC CAPACITOR	CKDYF473Z50
	C815	ELECTROLYTIC CAPACIT	CEAS102M6
	C816	MYLOR FILM CAPACITOR	CQMA224J50
	C817	MYLOR FILM CAPACITOR	CQMA332J50
	C818	MYLOR FILM CAPACITOR	CQMA681J50
	C819	ELECTR. CAPACITOR	CEAS2R2M50
	C820	MYLOR FILM CAPACITOR	CQMA471J50
	C821	ELECTR. CAPACITOR	CEAS2R2M50
	C822	ELECTR. CAPACITOR	CEANP010M50
	C823-826	ELECTR. CAPACITOR	CEAS100M50
	C827, 828	ELECTR. CAPACITOR	CEAS221M10
	C829	CERAMIC CAPACITOR	CCMSL470J50
	C830-832	CERAMIC CAPACITOR	CKDYF473Z50
	C833, 834	ELECTR. CAPACITOR	CEAS221M10
	C835	CERAMIC CAPACITOR	CCMSL470J50
	C836-838	CERAMIC CAPACITOR	CKDYF473Z50
	C839, 840	ELECTR. CAPACITOR	CEAS221M10
	C841	CERAMIC CAPACITOR	CCMSL470J50
	C842	ELECTR. CAPACITOR	CEAS101M16
	C843, 844	ELECTR. CAPACITOR	CEAS221M10
	C845	CERAMIC CAPACITOR	CCMSL470J50
	C846-848	CERAMIC CAPACITOR	CKDYF473Z50
	C849, 850	ELECTR. CAPACITOR	CEAS221M10
	C851	CERAMIC CAPACITOR	CCMSL470J50
	C852	ELECTR. CAPACITOR	CEAS101M16
	C853-856	CERAMIC CAPACITOR	CCMSL470J50
	C857	CERAMIC CAPACITOR	CKDYX103M25
	C883, 884	ELECTROLYTIC CAPACIT	CEHAQ471M35
	C885, 886	CERAMIC CAPACITOR	CKDYF473Z50
	C887	ELECTROLYTIC CAPACIT	CEHAQ330M35
	C888	CERAMIC CAPACITOR	CCDCH820J50
	C889	CERAMIC CAPACITOR	CCDCH680J50
	C890, 891	ELECTROLYTIC CAPACIT	CEHAQ471M35
	C892, 893	ELECTR. CAPACITOR	CEHAQ221M35
	C894, 895	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	NO	Description	Part NO.
	VR701	VR(10K)	ACP1043
	VR702, 703	VR(47K)	ACP1045
	VR704	VR(220k)	ACP1047
	VR705-707	VR(4. 7K)	ACP1042
	VR708	VR(22k)	ACP1044
	VR709-740	VR(4. 7K)	ACP1042
⚠	R101, 102	METAL OXIDE RESISTOR	RS3LMF221J
⚠	R452, 453	CEMENT RESISTOR	RT7PD4R7K
	R457	CARBON FILM RESISTOR	RD1/4PM222J
	R458, 462	CARBON FILM RESISTOR	RD1/2PM151J
⚠	R475-479	METAL OXIDE RESISTOR	RS2LMF6R8J
⚠	R480, 481	CARBON FILM RESISTOR	RD1/4PMFL□□□J
⚠	R482-485	CEMENT (68, 7W)	RT7PH680K
	R487, 488	CARBON FILM RESISTOR	RD1/4PM102J
		Other resistors	RD1/8PM□□□J

SUB DEFLECTION Assembly (AWZ2965)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC591, 592		NJM4558DXP
	Q591, 592	TRANSISTOR	2SC2705
	Q593	TRANSISTOR	2SC1740S
	D591, 592	DIODE	1SS252
	D593	ZENER DIODE	RD5. 1ESB
	D594	DIODE	1SS252

CAPACITORS

Mark	NO	Description	Part NO.
	C651	CERAMIC CAPACITOR	CKDYF473Z50
	C652, 653	ELECTR. CAPACITOR	CEAS010M50
	C654	CERAMIC CAPACITOR	CKCYB472K50
	C655	CERAMIC CAPACITOR	CCDSL101K500
	C656	CERAMIC CAPACITOR	CKDYF473Z50
	C661	CERAMIC CAPACITOR	CKCYB222K50
	C662, 663	MYLOR FILM CAPACITOR	CQMA102J50
	C664	CERAMIC CAPACITOR	CCDSL101K500
	C665	CERAMIC CAPACITOR	CKDYF473Z50
	C666	CERAMIC CAPACITOR	CKCYF103Z50
	C667	ELECTR. CAPACITOR	CEAS100M25

RESISTORS

Mark	NO	Description	Part NO.
×	R722-724	METALFILM RESISTER	
	R727, 728	CARBON FILM RESISTOR	RD1/2PM□□□J
	Other resistors		RD1/8PM□□□J

FRONT CONTROL Assembly (AWZ2967)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC861		PD5136
	Q861	TRANSISTOR	2SC1740S
	D861	LED(GREEN)	AEL-459
	D862	ZENER DIODE	RD3.0ESB
	D863, 864	DIODE	1SS252

SWITCHES

Mark	NO	Description	Part NO.
	S861-876	SWITCH (POWER, PINP(ON/OFF, INPUT), PRESET MENU(ON/OFF, SELECT/ ADJUST +, -, SET), STD/AV MEM, CHANNEL(+, -), DPO, VOLUME(+, -), INPUT SELECTOR, FACTORY ADJ ANTENNA)	ASG1034

CAPACITORS

Mark	NO	Description	Part NO.
	C951	ELECTROLYTIC CAPACIT	CEJA330M16
	C952, 953	CERAMIC CAPACITOR	CCDCH221J50
	C954	AUDIO FILM CAPACITOR	CFTXA104J50
	C955	CERAMIC CAPACITOR	CKDYF103Z50
	C956	ELECTR. CAPACITOR	CEJA2R2M50
	C957	CERAMIC CAPACITOR	CKDYB472K50
	C961	CERAMIC CAPACITOR	CCDSL121J50
	C962	ELECTR. CAPACITOR	CEJA101M6

RESISTORS

Mark	NO	Description	Part NO.
	VR861	VR(47K)	ACP1045
	Other resistors		RD1/8PM□□□J

OTHERS

Mark	NO	Description	Part NO.
	X861	CERAMIC RESONATOR(480kHz)	ASS1043
	PC861	Cds	SC-05-8S
	REMOTE SENSOR UNIT		AXX1010

☆POWER SUPPLY・DEFLECTION Assembly (AWV1146)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC651, 652	PHOTOCOUPLER	ON3161-Q
×	Q551, 552	TRANSISTOR	
	Q561	TRANSISTOR	2SC3332
	Q562	TRANSISTOR	2SD1276A
⚠	Q563	TRANSISTOR	2SD1911
	Q571	TRANSISTOR	2SC3332
	Q572	TRANSISTOR	2SD1276A
⚠	Q573	TRANSISTOR	2SD1911
	Q651-653	TRANSISTOR	2SA933S
	Q654-657	TRANSISTOR	2SC1740S
	Q658	TRANSISTOR	2SC3451
	Q659	TRANSISTOR	2SB824
	Q660	TRANSISTOR	2SC1740S
	Q661	TRANSISTOR	2SC2705
	Q662	TRANSISTOR	2SA933S
	Q663	TRANSISTOR	2SD1275
	Q664	TRANSISTOR	2SA933S
	Q665	TRANSISTOR	2SD1275
	Q666	TRANSISTOR	2SC1740S
×	D551, 552	ZENER DIODE	
	D553, 561	DIODE	1SS252
⚠	D562	DIODE	11E2
	D563, 571	DIODE	1SS252
⚠	D572	DIODE	11DF2FD
×	D573	DIODE	
⚠	D574, 575	DIODE	ES1F
	D651, 652	DIODE	1SS145
	D653	ZENER DIODE	HZS6B1L
	D654, 655	DIODE	1SS145
	D656	ZENER DIODE	HZS6B1L
	D657	DIODE	RB604
	D658-660	DIODE	1SS252
	D662-665	DIODE	1SS252
	D667-669	DIODE	1SS252
	D670, 671	DIODE	11DF1FD
	D672	DIODE	1SS252
	D673	DIODE	11DF1FD
	D674-676	DIODE	1SS252
	D677	ZENER DIODE	HZS6C2L
	D678	DIODE	1SS252
	D679	DIODE	RL2Z
	D680	DIODE	RL4Z
	D681	DIODE	RG4A
	D682-685	DIODE	RL4Z
	D686	ZENER DIODE	HZS6A1L
	D687	ZENER DIODE	HZS6B1L
	D688	ZENER DIODE	HZS18-1L
	D689	ZENER DIODE	HZS6B1L
	D690	ZENER DIODE	RD39ESB4

RELAYS

Mark	NO	Description	Part NO.
	RY651	RELAY	ASR-512
	RY652	RELAY	ASR1027

COILS AND TRANSFORMERS

Mark	NO	Description	Part NO.
	L551	INDUCTOR	LTA272J
	L552	COIL	ATL1053
	L553	COIL	ATL1058
	L554	COIL	ATL1057
	L555	FERRITE BEAD	ATX-028
	L651	LINE FILTER	ATF1031
	L652	COIL	ATH1009
	L653	LINE FILTER	ATF-207
	L654-665	FERRITE BEAD	ATX-028
	L666	COIL	ATH-133
	L667, 668	FERRITE BEAD	ATX-028
⚠	T551, 552	H. DRIVE TRANSFORMER	ATK1045
⚠×	T553	CONVERTER TRANS	
	T651	POWER TRANSFORMER	ATT1120
⚠	T652	CONVERTER TRANS	ATK1049

CAPACITORS

Mark	NO	Description	Part NO.
	C601	ELECTROLYTIC CAPACIT	CEHAQ221M16
	C602	ELECTR. CAPACITOR	CEAS470M16
	C603	CERAMIC CAPACITOR	CKDYF103Z50
	C604	ELECTR. CAPACITOR	CEAS470M16
	C605	ELECTR. CAPACITOR	CEAS101M16
	C606	ELE. CAP. (33μ/160V)	ACH-370
	C611	ELECTROLYTIC CAPACIT	CEHAQ010M2C
	C612	CERAMIC CAPACITOR	CKDYB102K500
	C613	ELECTR. CAPACITOR	CEHAQ010M50
	C614	CERAMIC CAPACITOR	CCDSL101K500
⚠	C615	ELE. CAP. (1μ/160V)	ACH-372
	C616	CER. CAP. (680P/2KV)	ACG1024
	C617	P.P. CAPACITOR	CQPA683J400
	C618	(0.012μ/1.2kV)	CFPHW123H3D
⚠	C619	MPP CAPACITOR(0.82μ/200V)	ACE1044
	C620	CERAMIC CAPACITOR	CCDSL181K500
	C621	M.P.P. (0.01μ/800V)	CFPHW103H3A
	C622	CERAMIC CAPACITOR	CKDYF473Z50
	C631	ELECTROLYTIC (1μ/160V)	CEHAQ010M2C
	C632	CERAMIC CAPACITOR	CCDSL101K500
	C633	CERAMIC CAPACITOR	CKDYB472K500
	C634	ELECTR. CAPACITOR	CEHAQ010M50
	C635	ELE. CAP. (10μ/160V)	ACH1117
	C636	ELECTR. CAPACITOR	CEHAQ100M50
	C637	ELECTROLYTIC CAPACIT	CEHAQ220M2C
	C638	CER. CAP. (680P/2KV)	ACG1024
	C639		CFPHW123H3D
	C640	CERAMIC CAPACITOR	CKDYF473Z50
	C641	ELECTROLYTIC CAPACIT	CEHAQ220M50
	C701, 702	FLM CAP. (0.1μ/250V)	ACE-507
	C703	ELECTR. CAPACITOR	CEAS102M25
	C704	CERAMIC CAPACITOR	CKCYF103Z50
	C705, 706	CER CAP(0.01μ/AC250V)	ACG-001
	C707	ELECTR. CAPACITOR	CEAS470M25
	C708	ELECTR. CAPACITOR	CEAS010M50
	C709	ELECTR. CAPACITOR	CEAS470M25
	C710, 711	CER CAP(0.01μ/AC250V)	ACG-001
	C712	ELECTR. CAPACITOR	CEAS100M50
	C713	CER. CAP. (1000P/2KV)	ACG-040
	C714	CERAMIC CAPACITOR	CCCSL151J50
	C715	ELECTR. CAPACITOR	CEAS101M16
	C716	ELECTR. CAPACITOR	CEAS470M25
	C717, 718	FLM CAP. (6800P/250V)	ACE1009
	C719	ELECTR. (470μ/200V)	ACH1147
	C720, 721	FLM CAP. (6800P/250V)	ACE1009
	C722	ELECTR. (820μ/200V)	ACH1148
	C723	CER. CAP. (1000P/2KV)	ACG-040
	C724	AUDIO FILM CAPACITOR	CFTXA224J50
	C725	ELECTR. (4.7μ/250V)	ACH-378
	C726	AUDIO FILM CAPACITOR	CFTXA474J50
	C727	CERAMIC CAPACITOR	CCDSL221K500
	C728	ELECTR. (47μ/100V)	ACH1132
	C729	CERAMIC CAPACITOR	CCDSL221K500
	C730	CERAMIC CAPACITOR	CKCYF103Z50
	C731	MYLOR FILM CAPACITOR	CQMA822J50
	C732	ELECTR. CAPACITOR	CEAS010M50
	C733	CER. CAP. (3300p/2kV)	ACG1008
	C734	CERAMIC CAPACITOR	CCDSL221K500
	C735	ELECTROLYTIC CAPACIT	CEHAQ471M16
	C736	CERAMIC CAPACITOR	CCDSL221K500
	C737	CCA (100P/2KV)	ACG-032
	C738, 739	CERAMIC CAPACITOR	CCDSL221K500
	C740	ELECTR. CAPACITOR	CEHAQ222M50
	C741	ELECTR. (560μ/160V)	ACH1146
	C742	ELECTR. CAPACITOR	CEHAQ222M35
	C743	ELECTROLYTIC CAPACIT	CEHAQ332M35
	C744	CERAMIC CAPACITOR	CKDYF103Z500
	C745	CERAMIC CAPACITOR	CKCYF473Z50
	C746, 747	CERAMIC CAPACITOR	CCDSL221K500
	C748	CERAMIC CAPACITOR	CKCYF473Z50
	C749	CERAMIC CAPACITOR	CKDYF103Z500
	C750	ELECTR. CAPACITOR	CEAS331M35
	C751, 752	ELECTR. CAPACITOR	CEHAQ222M35
	C753	CERAMIC CAPACITOR	CKCYF473Z50
	C754, 755	ELECTR. CAPACITOR	CEAS100M50
	C756	CERAMIC CAPACITOR	CKCYB681K50
	C757	ELECTR. CAPACITOR	CEAS010M50
	C758	ELECTR. CAPACITOR	CEAS100M50
	C759	ELECTR. CAPACITOR	CEAS221M16
	C760	CERAMIC CAPACITOR	CKCYF473Z50
	C761	ELECTR. CAPACITOR	CEAS010M50

RESISTORS

Mark	NO	Description	Part NO.
×	VR591	VR	
	VR592	VR (2.2k)	ACP1023
×	VR593	VR	
	VR651	VR (1k)	VRTS6VS102
×	R101	CARBON FILM RESISTOR	
×	R102		
×	R103		
⚠	R104	CARBON FILM RESISTOR	RD1/4PMFL3R9J
×	R105		
×	R107		
×	R108		
×	R109		
×	R110		
×	R111		
⚠	R113	CARBON FILM RESISTOR	RD1/4PMFL470J

Mark	NO	Description	Part NO.
⚠	R114	CARBON FILM RESISTOR	RD1/4PMFL3R9J
	R121	CARBON FILM RESISTOR	RD1/2PMFL103J
⚠	R125	CARBON FILM RESISTOR	RD1/2PMFL102J
	R126, 127	CARBON FILM RESISTOR	RD1/2PM□□□J
	R128, 129	CARBON FILM RESISTOR	RD1/4PMFL□□□J
	R130	METAL OXIDE RESISTOR	RS2PMF3R3J
	R131	CARBONFILM RESISTOR	RD1/2PM152J
	R132	METAL OXIDE RESISTOR	RS2PMF220J
	R134	RESISTOR(100K, 1/2W)	ACN1074
	R151	METAL OXIDE RESISTOR	RS3PMF512J
	R152	CARBON FILM RESISTOR	RD1/2PMFL152J
	R153	CARBON FILM RESISTOR	RD1/4PMFL471J
×	R154		
	R155	METAL OXIDE RESISTOR	RS2PMF010J
	R158	CARBON FILM RESISTOR	RD1/2PM222J
⚠	R159	CARBONFILM RESISTOR	RD1/4PMFL100J
×	R160		
×	R161		
	R162	METAL OXIDE RESISTOR	RS2PMF220J
⚠	R163	CARBONFILM RESISTOR	RD1/4PMFL2R2J
	R164, 165	METALFILM RESISTER	RN1/2PC□□□□F
	R167	CARBON FILM RESISTOR	RD1/2PMF122J
	R168	RESISTOR(47, 1/2W)	ACN-225
×	R169		
	R170, 171	RESISTOR(100K, 1/2W)	ACN1074
	R252	RESISTOR(2.2M, 1/2W)	ACN-208
	R266	METALFILM RESISTER	RN1/4PC1603F
	R269, 275	RESISTOR (1.0, 5W)	ACN1032
	R278	METAL OXIDE RESISTOR	RS1LMF473J
	R279	RESISTOR(2.2M, 1/2W)	ACN-208
	R280, 281	METAL OXIDE RESISTOR	RS3LMFR47J
	R282	RESISTOR (3.3, 5W)	ACN1050
	R284, 285	CARBON FILM RESISTOR	RD1/4PMFL□□□J
	R286	METAL OXIDE RESISTOR	RS3LMF2R2J
	R287	RESISTOR (3.3, 5W)	ACN1050
	R288	METAL OXIDE RESISTOR	RS3LMF2R2J
	R289, 291	CARBONFILM RESISTOR	RD1/2PM241J
	R293	CARBONFILM RESISTOR	RD1/2PM101J
	R294	METALFILM RESISTER	RN1/4PC3601F
	R296, 298	METALFILM RESISTER	RN1/4PC1603F
	R303	METAL OXIDE RESISTOR	RS2LMF223J
	R305, 306	CEMENT (18, 10W)	ACN1057
	R307	METAL OXIDE RESISTOR	RS1LMF272J
	R308	METAL OXIDE RESISTOR	RS2LMF010J
	R321, 322	METALFILM RESISTER	RN1/4PC□□□□F
	R323	METAL OXIDE RESISTOR	RS1LMF153J
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	NO	Description	Part NO.
		SHIELD COVER	ANH1166

AV I/O-3P・TUNER Assembly (AWZ2973)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC351	AV SELECTOR IC	PA0040
	IC501		M51365SP
	IC502		NJM78M09A
	IC503	US MPX DECODER IC	CXA1124AS
	IC504		TD6359P
	Q351, 352	TRANSISTOR	2SC1740S
	Q353-355	TRANSISTOR	2SA933S
	Q356	TRANSISTOR	2SC1740S
	Q357	TRANSISTOR	2SA933S
	Q358, 360	TRANSISTOR	2SC1740S
	Q364	TRANSISTOR	2SA933S
	Q371	TRANSISTOR	2SC1740S
	Q372	TRANSISTOR	2SA933S
	Q373, 374	TRANSISTOR	2SC1740S
	Q501	TRANSISTOR	2SC1740S
	Q502	TRANSISTOR	2SA933S
	Q503	TRANSISTOR	2SC1740S
	Q504	TRANSISTOR	2SA933S
	Q505	TRANSISTOR	2SC2878
	Q506-510	TRANSISTOR	2SC1740S
	Q511	TRANSISTOR	2SA933S
	Q512	TRANSISTOR	RN2203
	Q513	TRANSISTOR	2SC1740S
	Q514, 515	TRANSISTOR	2SC2786
	Q516	TRANSISTOR	RN1201
	Q517	TRANSISTOR	RN1203
	Q518	TRANSISTOR	2SC1740S
	Q519	TRANSISTOR	2SC1740SLN
	Q520-522	TRANSISTOR	2SA933S
	Q523	TRANSISTOR	2SC1740S
	Q524	TRANSISTOR	2SA933S
	Q525, 526	TRANSISTOR	2SC1740S
	Q527	TRANSISTOR	2SD880
	Q528, 529	TRANSISTOR	2SC1740S
	D351	DIODE	1SS252
	D501, 506	DIODE	1SS252
	D507	ZENER DIODE	RD5.6ESB2
	D508	ZENER DIODE	RD30ESB2
	D509	DIODE	1SS252

COILS AND FILTERS

Mark	NO	Description	Part NO.
	L501	FM DETECTION COIL	ATE-067
	L502, 503	AXIAL INDUCTOR	LAU2R2M
	L504	COIL	ATC-249
	L505	AXIAL INDUCTOR	LAU2R2M
	L506	COIL	ATC-226
	L507	AXIAL INDUCTOR	LAU120K
	L508	AXIAL INDUCTOR	LAUR47M
	L509	AXIAL INDUCTOR	LAU1R2M
	L510, 511	COIL	ATC-226
	L512		LAUR22M

Mark	NO	Description	Part NO.
	L513, 514	AXIAL INDUCTOR	LAU2R2M
	L515	COIL	ATC-254
	F501	CERAMIC FILTER	ATF-166
	F502	CERAMIC TRAP	ATF-114
	F503	SAW FILTER	ATF1019
	F504	SAW FILTER	ATF1046

CAPACITORS

Mark	NO	Description	Part NO.
	C351, 352	ELECTR. CAPACITOR	CEAS102M10
	C353	ELECTR. CAPACITOR	CEAS010M50
	C354-356	ELECTR. CAPACITOR	CEJA010M50
	C357	ELECTR. CAPACITOR	CEAS010M50
	C358	ELECTR. CAPACITOR	CEJA010M50
	C359	ELECTR. CAPACITOR	CEAS2R2M50
	C360	ELECTR. CAPACITOR	CEJA2R2M50
	C361, 362	CERAMIC CAPACITOR	CKDYF103Z50
	C363	CERAMIC CAPACITOR	CKDYF103Z50
	C364-366	ELECTR. CAPACITOR	CEAS220M16
	C367	ELECTR. CAPACITOR	CEAS101M16
	C368-371	ELECTR. CAPACITOR	CEAS220M16
	C372	ELECTR. CAPACITOR	CEAS220M16
	C373	ELECTR. CAPACITOR	CEAS100M25
	C374	ELECTR. CAPACITOR	CEAS010M50
	C375	ELECTR. CAPACITOR	CEAS220M16
	C376	ELECTR. CAPACITOR	CEJA010M50
	C377, 378	ELECTR. CAPACITOR	CEAS010M50
	C379	ELECTR. CAPACITOR	CEAS222M16
	C380-383	CERAMIC CAPACITOR	CKDYF103Z50
	C384	CERAMIC CAPACITOR	CKDYF103Z50
	C385	ELECTR. CAPACITOR	CEANP220M10
	C386	CERAMIC CAPACITOR	CKDYF103Z50
	C387	ELECTR. CAPACITOR	CEAS220M16
	C388, 389	CERAMIC CAPACITOR	CCDCH150J50
	C491	AUDIO FILM CAPACITOR	CFTXA473J50
	C492	ELECTR. CAPACITOR	CEAS4R7M50
	C493	ELECTR. CAPACITOR	CEAS101M10
	C494	ELECTR. CAPACITOR	CEAS4R7M50
	C495	MYLOR FILM CAPACITOR	CQMA103J50
	C496	CERAMIC CAPACITOR	CKDYB102K50
	C497	ELECTR. CAPACITOR	CEAS4R7M50
	C498	ELECTR. CAPACITOR	CEAS2R2M50
	C499	ELECTR. CAPACITOR	CEAS470M16
	C500	CERAMIC CAPACITOR	CKDYF473Z50
	C501	CERAMIC CAPACITOR	CKDYB222K50
	C502	ELECTR. (3.3μ/50V)	ACH1128
	C503	MYLOR FILM CAPACITOR	CQMA563J50
	C504	CERAMIC CAPACITOR	CKDYB102K50
	C505	CERAMIC CAPACITOR	CKDYF473Z50
	C506	CERAMIC CAPACITOR	CKDYB222K50
	C507	ELECTR. CAPACITOR	CEAS331M16
	C508	ELECTR. CAPACITOR	CEAS010M50
	C509	ELECTR. CAPACITOR	CEAS2R2M50
	C510	ELECTR. (10μ/50V)	ACH1129
	C511	CERAMIC CAPACITOR	CKDYB392K50
	C512	CERAMIC CAPACITOR	CKDYB102K50
	C513	ELECTROLYTIC CAPACIT	CEANP4R7M50
	C514	CERAMIC CAPACITOR	CKDYF103Z50
	C515	CERAMIC CAPACITOR	CKDYF473Z50
	C517	CERAMIC CAPACITOR	CCMCH050C50
	C518	MYLOR FILM CAPACITOR	CQMA272J50
	C519	CERAMIC CAPACITOR	CKDYF473Z50
	C520	ELECTR. CAPACITOR	CEAS331M16
	C521	CERAMIC CAPACITOR	CKDYF103Z50
	C522	CERAMIC CAPACITOR	CKDYB102K50
	C523	ELECTR. CAPACITOR	CEAS010M50
	C524, 525	CERAMIC CAPACITOR	CKDYF103Z50
	C526	ELECTR. CAPACITOR	CEAS100M50
	C527, 528	ELECTR. CAPACITOR	CEAS470M16
	C529	CERAMIC CAPACITOR	CCDRH270J50
	C530	CERAMIC CAPACITOR	CKDYB102K50
	C531	ELECTR. CAPACITOR	CEAS470M16
	C532	ELECTR. CAPACITOR	CEASR47M50
	C533	ELECTR. CAPACITOR	CEAS101M10
	C534	CERAMIC CAPACITOR	CKDYF103Z50
	C535	ELECTR. CAPACITOR	CEAS2R2M50
	C536	ELECTR. CAPACITOR	CEANPR22M50
	C537	CERAMIC CAPACITOR	CCMCH150J50
	C538	CERAMIC CAPACITOR	CCDRH560J50
	C539	CERAMIC CAPACITOR	CCDSL820J50
	C540	CERAMIC CAPACITOR	CKDYF103Z50
	C541	ELECTR. CAPACITOR	CEAS4R7M50
	C542	ELECTR. CAPACITOR	CEAS101M10
	C543	CERAMIC CAPACITOR	CKDYB122K50
	C544	MYLOR FILM CAPACITOR	CQMA123J50
	C545	MYLOR FILM CAPACITOR	CQMA562K50
	C546	CERAMIC CAPACITOR	CKDYF103Z50
	C547	ELECTR. CAPACITOR	CEASR47M50
	C548	ELECTR. CAPACITOR	CEAS4R7M50
	C549	ELECTR. CAPACITOR	CEAS2R2M50
	C550	ELECTR. CAPACITOR	CEAS470M16
	C551, 552	CERAMIC CAPACITOR	CKDYB102K50
	C553	ELECTR. CAPACITOR	CEAS101M16
	C554	CERAMIC CAPACITOR	CKDYF103Z50
	C555	CERAMIC CAPACITOR	CKDYB102K50
	C556	ELECTR. CAPACITOR	CEAS4R7M50
	C557	CERAMIC CAPACITOR	CCMCH050C50
	C558	CERAMIC CAPACITOR	CCMCH040C50
	C559	CERAMIC CAPACITOR	CCDRH560J50
	C560	CERAMIC CAPACITOR	CCMCH050C50
	C561	CERAMIC CAPACITOR	CCMCH040C50
	C562	CERAMIC CAPACITOR	CCDSH470J50
	C563	CERAMIC CAPACITOR	CKDYB102K50
	C564	ELECTR. CAPACITOR	CEAS4R7M50
	C565	CERAMIC CAPACITOR	CKDYF103Z50
	C566	MYLOR FILM CAPACITOR	CQMA333J50
	C567	MYLOR FILM CAPACITOR	CQMA154J50
	C568	CERAMIC CAPACITOR	CKDYF103Z50
	C569, 570	CERAMIC CAPACITOR	CCMCH270J50
	C571	CERAMIC CAPACITOR	CKDYF103Z50
	C572	ELECTR. CAPACITOR	CEAS101M10
	C573	CERAMIC CAPACITOR	CCMSL101J50
	C574	CERAMIC CAPACITOR	CKDYB102K50
	C575	ELECTR. CAPACITOR	CEAS102M16

Mark	NO	Description	Part NO.
	C576	CERAMIC CAPACITOR	CKDYB102K50
	C577-580	CERAMIC CAPACITOR	CCMSL101J50
	C581, 582	ELECTR. CAPACITOR	CEAS220M16
	C583	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	NO	Description	Part NO.
	VR501-503	VR(4.7K)	ACP1024
	VR504	VR(10K)	ACP1025
	VR505, 506	VR(47K)	ACP1027
	R1148	CARBON FILM RESISTOR	RD1/2PM100J
	R1195	METAL OXIDE RESISTOR	RS3LMF330J
	R1511	CARBONFILM RESISTOR	RD1/2PMFL3R9J
	R1523, 1526	METALFILM RESISTER	RN1/4PC4702F
	R1529	CARBONFILM RESISTOR	RD1/2PMFL680J
	R1530	CARBONFILM RESISTOR	RD1/4PM221J
	R1531	METALFILM RESISTER	RN1/4PC4302F
	R1541, 1542	METALFILM RESISTER	RN1/4PC □□□□ F
	R1588	CARBONFILM RESISTOR	RD1/4PMFL8R2J
	R1610	METAL OXIDE RESISTOR	RS2LMF560J
	R1611	CARBON FILM RESISTOR	RD1/2PM391J
		Other resistors	RD1/8PM □□□ J

OTHERS

Mark	NO	Description	Part NO.
	X501	CRYSTAL OSCILLATOR(4.0MHz)	ASS-013
		MINI JACK(CONTROL)	AKN-207
		THREE 4P MINI DIN SOCKET	AKP1065
		TV FRONT END	AXF1040
		COAXIAL WIRE WITH PIN PLUG	ADE-050
		RF SWITCH	AXF1041
		3P PIN JACK	AKB1102
		12P PIN JACK	AKB1132

MICOM • SURROUND Assembly (AWZ2977)

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC301		PA0042
	IC302		LA3607
	IC303		M5218L
	IC304		BU4066BL
	IC401	TV SYSTEM CONT'L	PDB010-A
	IC402		M6M80021P
	IC403		TC4051BP
	IC404		TC4066BP
	IC405		M51951BSL
	Q301, 302	TRANSISTOR	RN1203
	Q303	TRANSISTOR	RN2203
	Q401	TRANSISTOR	2SC1740S
	Q402	TRANSISTOR	2SA933S
	Q403-409	TRANSISTOR	2SC1740S
	Q410	TRANSISTOR	2SD438(A)
	Q411	TRANSISTOR	2SA933S
	Q412	TRANSISTOR	2SC1740S
	Q413	TRANSISTOR	2SA933S
	Q414-416	TRANSISTOR	2SC1740S
	Q417	TRANSISTOR	2SA933S
	Q418	TRANSISTOR	2SC1740S
	Q419	TRANSISTOR	2SA933S
	Q420	TRANSISTOR	2SC1740S
	Q421	TRANSISTOR	2SA933S
	Q422-425	TRANSISTOR	2SC1740S
	Q426-428	TRANSISTOR	2SA933S
	Q429, 430	TRANSISTOR	2SC1740S
	Q431, 432	TRANSISTOR	2SA933S
	Q433	TRANSISTOR	2SC1740S
	Q434-436	TRANSISTOR	2SA933S
	Q437, 438	TRANSISTOR	2SC1740S
	D301	ZENER DIODE	RD12ESB3
	D401, 402	DIODE	1SS252
	D405-408	DIODE	1SS252
	D415, 417	DIODE	1SS252
	D418	ZENER DIODE	RD5.1ESB2
	D419-421	DIODE	1SS252
	D423-426	DIODE	1SS252
	D428, 429	DIODE	1SS252
	D431-434	DIODE	1SS252
	D435		RD3.6ESB2

COIL

Mark	NO	Description	Part NO.
	L401	AXIAL INDUCTOR	LAU150K

CAPACITORS

Mark	NO	Description	Part NO.
	TC431	CERAMIC TRIMMER	ACM-020
	C311-314	ELECTR. CAPACITOR	CEAS010M50
	C316	ELECTR. CAPACITOR	CEAS102M16
	C317	MYLOR FILM CAPACITOR	CQMA272J50
	C318	MYLOR FILM CAPACITOR	CQMA561J50
	C319	MYLOR FILM CAPACITOR	CQMA822J50
	C320	MYLOR FILM CAPACITOR	CQMA561J50
	C321	MYLOR FILM CAPACITOR	CQMA153J50
	C322	MYLOR FILM CAPACITOR	CQMA102J50
	C323	MYLOR FILM CAPACITOR	CQMA273J50
	C324	MYLOR FILM CAPACITOR	CQMA182J50
	C325	MYLOR FILM CAPACITOR	CQMA393J50
	C326	MYLOR FILM CAPACITOR	CQMA272J50
	C327	MYLOR FILM CAPACITOR	CQMA683J50
	C328	MYLOR FILM CAPACITOR	CQMA472J50
	C329	AUDIO FILM CAPACITOR	CFTXA104J50
	C330	MYLOR FILM CAPACITOR	CQMA822J50
	C331		CFTXA184J50
	C332	MYLOR FILM CAPACITOR	CQMA123J50
	C333	ELECTR. CAPACITOR	CEAS470M16
	C334	ELECTR. CAPACITOR	CEAS220M16
	C336	ELECTR. CAPACITOR	CEAS221M16
	C337, 338	CERAMIC CAPACITOR	CKDYF103Z50
	C339-342	ELECTR. CAPACITOR	CEANP010M50
	C343, 344	ELECTROLYTIC CAPACIT	CEAS4R7M50
	C411	CERAMIC CAPACITOR	CKDYX104M25
	C412	CERAMIC CAPACITOR	CKDYF472Z50
	C413	ELECTR. CAPACITOR	CEAS0R1M50
	C414	CERAMIC CAPACITOR	CKDYF473Z50
	C415, 416	CERAMIC CAPACITOR	CKDYF223Z50
	C417	ELECTR. CAPACITOR	CEAS330M25
	C418	ELECTR. CAPACITOR	CEAS010M50
	C419	ELECTR. CAPACITOR	CEAS100M50
	C422	CERAMIC CAPACITOR	CKDYF472Z50
	C423	ELECTR. CAPACITOR	CEAS100M50

Mark	NO	Description	Part NO.
	C424	ELECTR. CAPACITOR	CEAS010M50
	C425	CERAMIC CAPACITOR	CKDYF103Z50
	C426, 427	CERAMIC CAPACITOR	CKDYF473Z50
	C428	ELECTR. CAPACITOR	CEAS101M10
	C429	CERAMIC CAPACITOR	CKDYF103Z50
	C430	CERAMIC CAPACITOR	CCDCH390J50
	C432	CERAMIC CAPACITOR	CCDCH820J50
	C433	ELECTR. CAPACITOR	CEAS2R2M50
	C434	CERAMIC CAPACITOR	CKDYF473Z50
	C435	ELECTR. CAPACITOR	CEAS0R1M50
	C436	ELECTR. CAPACITOR	CEAS101M10
	C437	ELECTR. CAPACITOR	CEAS2R2M50
	C438	ELECTR. CAPACITOR	CEAS330M25
	C439	CERAMIC CAPACITOR	CKDYF473Z50
	C440, 441	ELECTR. CAPACITOR	CEAS2R2M50
	C442	ELECTR. CAPACITOR	CEAS101M10
	C443	CERAMIC CAPACITOR	CKDYF473Z50
	C444-446	ELECTR. CAPACITOR	CEAS2R2M50
	C447	ELECTR. CAPACITOR	CEAS010M50
	C448	CERAMIC CAPACITOR	CKDYF103Z50
	C449, 450	ELECTR. CAPACITOR	CEAS010M50
	C452-454	ELECTR. CAPACITOR	CEAS010M50

RESISTORS

	R1264	RESISTOR ARRAY(100K)	RA6T104J
	R1284	RESISTOR ARRAY (10K)	RA8T103J
	R1293	RESISTOR ARRAY (10K)	RA4T103J
	R1321	RESISTOR ARRAY(4.7K)	RA4T472J
	R1322	RESISTOR ARRAY (10K)	RA4T103J
	R1491, 1492	CARBON FILM RESISTOR	RD1/4PMFL3R9J
	R819	CARBON FILM RESISTOR	RD1/4PMFL220J
	Other resistors		RD1/8PM□□□J

OTHERS

	X401	CERAMIC RESONATOR(4.19MHz)	ASS1018

LOGIC Assembly (AWZ2955)

SEMICONDUCTORS

	IC980		TC74HC04AP
	IC981		TC74HC4040AP
	IC982		TC74HC74AP
	IC983		TC74HC00AP
	IC984		TC74HC32AP
	IC985		TC74HC04AP
	IC986		TC74HC08AP
	IC987		TC74HC4040AP
	Q925, 926	TRANSISTOR	2SC1740S
	D980-982	DIODE	1SS252
	D984	DIODE	1SS252

CAPACITORS

Mark	NO	Description	Part NO.
	C250	CERAMIC CAPACITOR	CKDYF473Z50
	C251	CERAMIC CAPACITOR	CCCSL680J50
	C252	CERAMIC CAPACITOR	CKDYB102K50
	C253	CERAMIC CAPACITOR	CCCSL101J50
	C254	CERAMIC CAPACITOR	CKDYF473Z50
	C255	CERAMIC CAPACITOR	CCCSL101J50
	C256	CERAMIC CAPACITOR	CCCSL121J50
	C259	CERAMIC CAPACITOR	CKDYF473Z50
	C260	CERAMIC CAPACITOR	CCCSL221J50
	C261-266	CERAMIC CAPACITOR	CKDYF473Z50
	C267	ELECTR. CAPACITOR	CEAS010M50
	C268	CERAMIC CAPACITOR	CCCSL101J50

RESISTORS

	All resistors		RD1/8PM□□□J

PINP SELECT Assembly (AWZ2956)

SEMICONDUCTORS

	IC901, 902		NJM2235S
	Q901	TRANSISTOR	2SA933S
	Q902, 903	TRANSISTOR	2SC1740S
	D901-910	DIODE	1SS252

CAPACITORS

	C971	ELECTR. CAPACITOR	CEAS100M50
	C972	CERAMIC CAPACITOR	CKDYB103K50
	C973-976	ELECTR. CAPACITOR	CEAS100M50
	C977	CERAMIC CAPACITOR	CKDYB103K50
	C978	ELECTR. CAPACITOR	CEAS100M50
	C979-981	ELECTR. CAPACITOR	CEAS101M16
	C982	ELECTR. CAPACITOR	CEAS221M16

RESISTORS

	All resistors		RD1/8PM□□□J

FRONT INPUT TERMINAL Assembly (AWZ2969)

RESISTORS

	All resistors		RD1/8PM□□□J

OTHERS

	1P PIN JACK		AKB-104
	1P PIN JACK		AKB-105
	1P PIN JACK		AKB-106
	4P MINI DIN SOCKET		AKP1016

9. ADJUSTMENTS

- Adjustment items are described as follows.

9.1 When POWER SUPPLY • DEFLECTION assembly is repaired.
  9.1.1 Power supply section.
  9.1.2 Deflection section.
9.2 When POWER SUPPLY • DEFLECTION assembly is replaced.
  9.2.1 Power supply section.
  9.2.2 Deflection section.
9.3 When VERTICAL • VIDEO • AUDIO assembly is repaired.
  9.3.1 Vertical section.
  9.3.2 FACTORY ADJ mode
  9.3.3 Video section.
9.4 When VERTICAL • VIDEO • AUDIO assembly is replaced.
9.5 When MICOM • SURROUND assembly is repaired or replaced.
9.6 When AV I/O-3P • TUNER assembly is repaired.
9.7 When AV I/O-3P • TUNER assembly is replaced.
9.8 When CONVERGENCE assembly is repaired. or replaced.
  9.8.1 Parabola waveform top level ajustment.
  9.8.2 Convergence position control.
  9.8.3 Convergence adjustment.
9.9 When FRONT CONTROL assembly is repaired.
9.10 When FRONT CONTROL assembly is replaced.
9.11 When R, G or B CRT DRIVE assembly is repaired or replaced.
9.12 When SUB DEFLECTION assembly is repaired or replaced.
9.13 When CRT assembly R, G or B is replaced.
9.14 When LENS assembly is replaced.
9.15 When PINP or PINP SUB assemblies are repaired or replaced. (SD-P5047-Q, SD-P5043-K, SD-P5043-Q, PRO-93 AND PRO-73 only)
9.16 When other assemblies are repaired or replaced.
9.17 DPO level setting.
9.18 DPO sensitivity adjustment.
9.19 Anode cable connection and disconnection.

- These adjustment procedures are described separately for adjustments following assembly exchange and adjustments following repairs.
- When replacing the assemblies, always use recommended replacements.
- Symbols in parentheses next to the adjustment position ( ) indicate denotes the relevant assembly to be adjusted.

D : POWER SUPPLY • DEFLECTION assembly
VR1 : Focus variable resistor
V : VERTICAL • VIDEO • AUDIO assembly
M : MICOM • SURROUND assembly
T : AV I/O-3P • TUNER assembly
C : CONVERGENCE assembly
P : PINP assembly

- The adjustment points and TP terminals on the each assemblies are shown in Fig. 9-8 thru 9-11.

Fig. 9-8 :
  CONVERGENCE assembly, front panel, FRONT CONTROL assembly and focus variable resistor.
Fig. 9-9 :
  VERTICAL • VIDEO • AUDIO assembly, AV I/O-3P • TUNER assembly, MICOM • SURROUND assembly, POWER SUPPLY • DEFLECTION assembly and PINP assembly.
Fig. 9-10 :
  R, G, B CRT DRIVE assembly and deflection yoke.
Fig. 9-11 :
  Lens assembly (Red, Green, Blue).

- Set the input terminals at the rear panel as follows unless otherwise noted.

VIDEO signal : INPUT VDP VIDEO terminal
AUDIO signal : INPUT VDP AUDIO terminal

- Set the picture quality to standard by remote control unit unless otherwise noted.

9.1 WHEN POWER SUPPLY • DEFLECTION ASSEMBLY IS REPAIRED

Note: VR591 and VR593 are protected by the shield covers (ANH1166) so that they can not be adjusted. Do not try to turn these volumes by removing their shield cover. (Otherwise, the sensitivity of the protection circuit against the X-ray and the anode voltage will be affected.)

- Adjustment test points are located in the POWER SUPPLY • DEFLECTION assembly.

9.1.1 Power supply section

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	135V power supply adjustment	Black Burst Signal	VR651 (D)	Adjust the voltage of both sides of C741 to 135V ± 1V.

● Each output voltages check

After performed +135V adjustment, confirm the each voltages as follows.

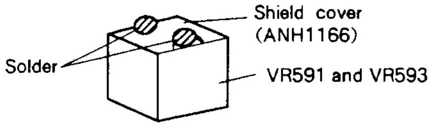
Measuring point	Voltage	Measuring point	Voltage
E1 +12V STB (6 pin or 7 pin) for P.GND (5 pin)	+12V ± 4V	E1 +30V (12 pin) for V.GND (11 pin)	+30V ± 5V
E3 +23V (4 pin) for V.GND (2 pin or 3 pin)	+25V ± 5V	E1 +39V (13 pin) for GND (10 pin)	+39V ± 3V
E3 −23V (1 pin) for V.GND (2 pin or 3 pin)	−25V ± 5V	E2 +35V (4 pin or 3 pin) for GND (2 pin or 1 pin)	+ 32V ± 5V (less than +40V)
E1 +13.5V (8 pin or 9 pin) for GND (10 pin)	+13.5V ± 0.5V		
E1 +9V (1 pin) for GND (10 pin)	+ 10V ± 2V	E4 H.T.+ (4 pin) for H.T.− (5 pin)	+6.25V ± 0.25V

9.1.2 Deflection section

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	Focus adjustment	Cross hatch signal	Focus VR (VR1)	Optimize the focus of each CRT assembly. (Focus is easier to judge if red and blue are displaced by turning the convergence controls on the remote control as shown in Fig. 9-8. Readjust these controls to their original positions after completing the focus adjustment.)
2	Horizontal size adjustment	Monoscope signal or ordinary broadcasting	VR592 (D)	Adjust to 93.5%±2% (left), 94.5%±2% (right) when using the monoscope signal, and adjust so that the screen picture does not lack any part of the entire picture field when using the ordinary broadcasting. After adjustment is complete, confirm the vertical size in section 9.3.1 and convergence in section 9.8.3.
3	White balance adjustment	Ordinary broadcasting	Screen (VR1) (R) (B)	Adjust the white if proper adjustment cannot be achieved as follows. Set the COLOR by the remote control to minimum, adjust the screen VRs to obtained best picture.

9.2 WHEN POWER SUPPLY • DEFLECTION ASSEMBLY IS REPLACED

Note: As VR591 and VR593 in the POWER SUPPLY• DEFLECTION assembly supplied as a spare part are protected by the shield cover (ANH1166). Never take off the shield cover (ANH1166).



9.2.1 Power supply section

- No adjustment required.

9.2.2 Deflection section

- Adjust focus, horizontal size and white balance as described in section 9.1.2.

9.3 WHEN VERTICAL • VIDEO • AUDIO ASSEMBLY IS REPAIRED

- Adjustment test points (TP) are located in the VERTICAL•VIDEO•AUDIO assembly unless otherwise noted. (Refer to Fig. 9-9)

9.3.1 Vertical section

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	Vertical size adjustment	Monoscope signal	VR103 (V)	Adjust the vertical size to 90 % ± 3 %. After adjustment is complete, confirm the convergnece as described in section 9.8.3.

9.3.2 FACTORY ADJ mode

- **What is FACTORY ADJ mode?**

Picture quality data (PIONEER standard and VNR) for PROJECTION MONITOR RECEIVER are stored in a non-volatile memory (IC402) of the MICOM • SURROUND assembly. FACTORY ADJ mode is used for picture quality data modification or new data addition which may be required when replacing or repairing the MICOM•SURROUND assembly or when replacing IC402. When this mode is activated, the convergence position is set to the center of its variable range (the convergence position is reset).

● FACTORY ADJ mode operation

FACTORY ADJ mode is activated by pressing S874 on the front with a small screwdriver or equivalent. (See Fig. 9-8.)

Then, a telop is displayed in red on the screen as shown in Fig. 9-1①. This mode is for confirming control operations for picture quality, sound quality and convergence position. For details, see page 86.

When the MUTE key on the remote control unit is subsequently pressed, a telop is displayed in blue as shown in ②.

This is PIONEER standard setting mode. By pressing the PICTURE key on the remote control unit, the items of picture quality data will be cyclically selected. Any desired item can be directly selected with the corresponding unmeric key on the remote control unit. Use the ◀ADJUST▶ key on the remote control unit (numerical values in the screen telop are changed by the key).

When the MUTE key is pressed again, a telop will be displayed in green as shown in ③. This is VNR setting mode. In the same manner as with the above PIONEER standard setting mode, use the PICTURE key or numeric keys for selection of the picture quality items and the ◀ADJUST▶ key for adjustments.

By pressing S874 again, FACTORY ADJ mode is released and the normal condition is resumed.

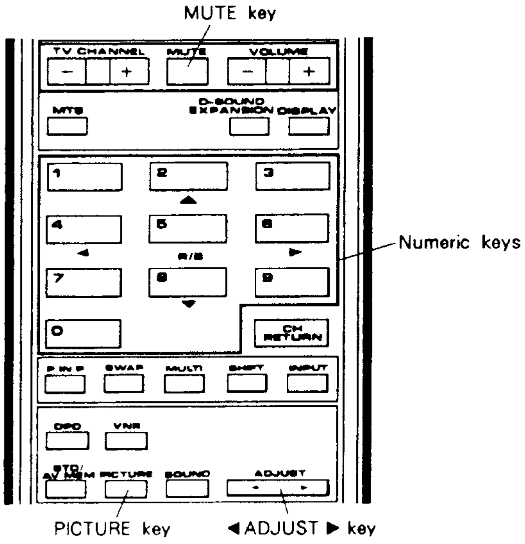
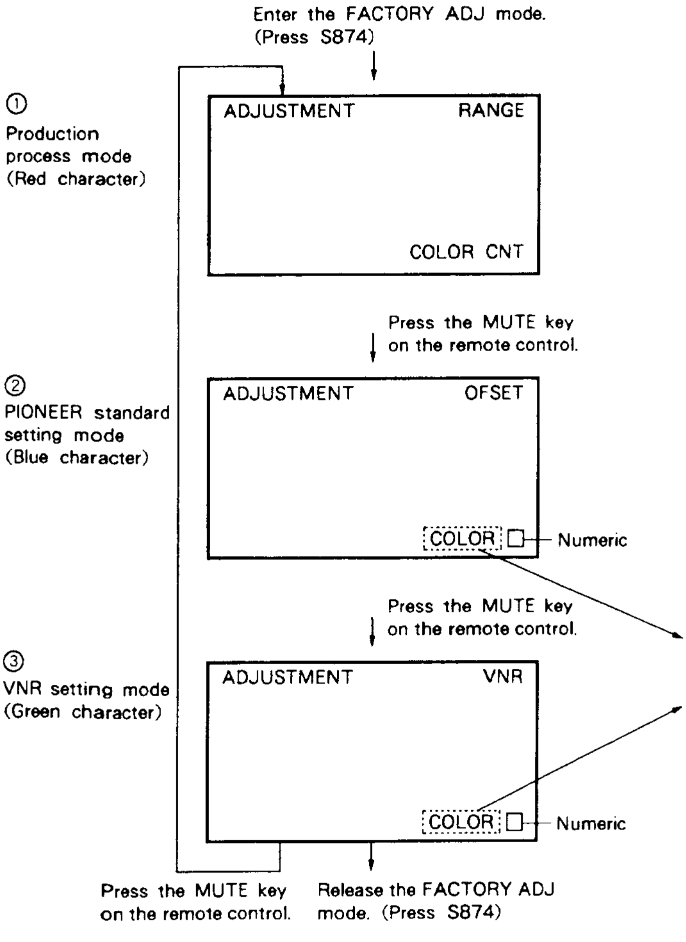

MUTE key
TV CHANNEL
MUTE
VOLUME
MTS
D-SOUND EXPANSION
DISPLAY
1
2
3
4
5
6
7
8
9
0
CH RETURN
PIP
SWAP
MULTI
SHIFT
INPUT
DPD
VNR
STD/AV MEM
PICTURE
SOUND
ADJUST
Numeric keys
PICTURE key
◀ADJUST▶ key

Fig. 9-1-1 Remote control unit


Enter the FACTORY ADJ mode.
(Press S874)
①
Production process mode
(Red character)
ADJUSTMENT RANGE
COLOR CNT
Press the MUTE key on the remote control.
②
PIONEER standard setting mode
(Blue character)
ADJUSTMENT OFSET
COLOR
Numeric
Press the MUTE key on the remote control.
③
VNR setting mode
(Green character)
ADJUSTMENT VNR
COLOR
Numeric
Press the MUTE key on the remote control.
Release the FACTORY ADJ mode. (Press S874)

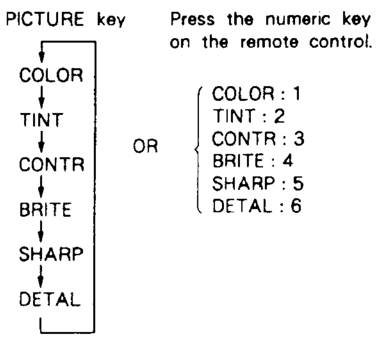
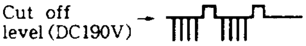
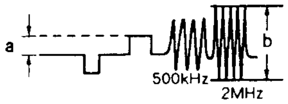
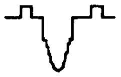
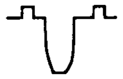

PICTURE key
COLOR
TINT
CONTR
BRITE
SHARP
DETAL
OR
Press the numeric key on the remote control.
COLOR : 1
TINT : 2
CONTR : 3
BRITE : 4
SHARP : 5
DETAL : 6

Fig. 9-1-2 Screen indication of FACTORY ADJ mode

9.3.3 Video section

- As to the FACTORY ADJ mode, refer to the section 9.3.2.

<table>
<tr><th>Step No.</th><th colspan="2">Adjustment item</th><th>Input signal</th><th>Adjustment point</th><th>Adjustment procedure</th></tr>
<tr><td>1</td><td colspan="2">Comb filter adjustment</td><td>Color bar</td><td>VR101, L108 (V)</td><td>Adjust TP-01 3.58MHz component to minimum level.</td></tr>
<tr><td rowspan="2">2</td><td colspan="2" rowspan="2">White balance adjustment</td><td rowspan="2">Color bar signal without color signal</td><td>Screen VR (R),(B) (VR1)</td><td>Adjust the screen VRs (R) and (B) until grey color can just be seen in the color of dark area. (Do not move the green VR at this stage.)</td></tr>
<tr><td>VR105(R)
VR104(B) Drive VR (V)</td><td>Using the drive VR, adjust the color of bright area to white.</td></tr>
<tr><td>3</td><td rowspan="9">PIONEER Standard setting *1</td><td colspan="4">Set to the PIONEER standard setting mode of FACTORY ADJ mode. (After adjustment is complete, release the normal condition.)</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Brightness adjustment</td><td rowspan="2">Cross hatch signal</td><td>COLOR (*4)</td><td>Minimize Color by remote control.</td></tr>
<tr><td>BRITE (*4)</td><td>Adjust the cut off level at TP-GK of G. CRT DRIVE assembly to DC190V. (After adjustment, confirm the white balance.)

(After this adjustment, adjust color as described in step No. 4).</td></tr>
<tr><td>5</td><td>Detail adjustment</td><td rowspan="2">Multi burst</td><td>DETAL (*4)</td><td>Adjust the numerical value of telop to 2.5. *3</td></tr>
<tr><td>6</td><td>Sharpness adjustment</td><td>SHARP (*4)</td><td>At TP-05, set the rate of b (peak-to-peak value at 2MHz) to a (level from black to white) as follows. a : b = 1 : 2 (+6.0dB)
 </td></tr>
<tr><td>7</td><td>Color adjustment</td><td rowspan="2">Color bar</td><td>COLOR (*4)</td><td>Adjust screen to optimum condition.</td></tr>
<tr><td>8</td><td>Tint adjustment</td><td>TINT (*4)</td><td>Adjust screen to optimum condition.</td></tr>
<tr><td>9</td><td rowspan="2">Contrast adjustment</td><td rowspan="2">Free signal</td><td>CONTR (*4)</td><td>Adjust screen to optimum condition.</td></tr>
<tr><td>10</td><td>—</td><td>At the TP-BK of B. CRT DRIVE assembly, confirm that the signal is shaped as shown below.
 Shapely waveform  Shapeless waveform</td></tr>
<tr><td rowspan="2">11</td><td colspan="2" rowspan="2">VNR setting</td><td colspan="3">Set to the VNR setting mode of FACTORY ADJ mode. (After adjustment is complete, release the normal condition.) *2</td></tr>
<tr><td colspan="3">Set the value of numeric telop for each adjustment items as table. *3<table><tr><th>Item</th><th>Telop</th><th>Item</th><th>Telop</th></tr><tr><td>COLOR</td><td>−30</td><td>BRITE</td><td>−15</td></tr><tr><td>TINT</td><td>0</td><td>SHARP</td><td>−50</td></tr><tr><td>CONTR</td><td>0</td><td>DETAL</td><td>−50</td></tr></table></td></tr>
<tr><td rowspan="4">12</td><td colspan="2" rowspan="4">Blue tailing adjustment</td><td rowspan="4">Cross signal</td><td rowspan="2">—</td><td>Adjust the SG output of the input cross signal to maximum level.</td></tr>
<tr><td>Maximize contrast by remote control.</td></tr>
<tr><td rowspan="2">VR102 (V)</td><td>Turn VR102 fully counter clockwise (resulting in blue tailing.).</td></tr>
<tr><td>Turn the VR clockwise until there is no blue tailing at the vertical cross line on the screen.</td></tr>
</table>

*1 : When setting the PIONEER standard, "detail" is displayed for the numeric telop for adjustment in FACTORY ADJ mode.
*2 : Check the convergence position after releasing FACTORY ADJ mode.
*3 : These values are set at the factory and can be changed at the request of the user.
*4 : Adjust by remote control.

9.4 WHEN VERTICAL • VIDEO • AUDIO ASSEMBLY IS REPLACED

Adjust the vertical size adjustment of vertical section, white balance adjustment of video block, PIONEER standard setting, VNR setting and blue tailing adjustment as described in section 9.3.

Note: What is ADJUSTMENT RANGE Mode in FACTORY ADJ?

In ADJUSTMENT RANGE mode, three points, CENTER, MIN and MAX, in the variable range of the control items (COLOR, TINT, CONTRAST, BRITE, SHARPNESS, DETAL, BASS, TREBL, BALNC and CONVER) can be selected in sequence.
This permits the variable range check for the above items to be performed easily and quickly after repairs.
To confirm, the numerical keys on the remote control unit are used after activating ADJUSTMENT RANGE mode of FACTORY ADJ mode. The relationship between the control items and the numerical keys are shown to the right.

1 : COLOR
2 : TINT
3 : CONTRAST
4 : BRITE
5 : SHARPNESS
6 : DETAL
7 : BASS
8 : TREBL
9 : BALNC
0 : CONVER

Example ;

When performing the COLOR variable range check, press the 1 key on the remote control unit.
Press the 1 key repeatedly.

→ CNT → MIN → MAX ┐

The points to be checked are cyclically selected.

Confirmation of BALNC (9 key)
Press the 9 key repeatedly.
CNT : Both channel
MIN : Rch only
MAX : Lch only

Confirmation of CONVER (0 key)
Press the 0 key repeatedly.
CNT : Center position
MIN : Moves to the slant upward of right.
MAX : Moves to the slant downward of left.

9.5 MICOM • SURROUND ASSEMBLY IS REPAIRED OR REPLACED

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	PIONEER standard setting ＊1, ＊3	—	—	Perform PIONEER standard setting as described in section 9.3.3.
2	Convergence position ＊1, ＊3	Signal with synchronizing signal meaning	—	Perform convergence position control adjustment as described in section 9.8.2.
3	Telop position		TC431 (M)	Generate test cross signal (refer to Fig. 9-3), and adjust the cross to center of screen.
4	VNR setting ＊1, ＊2	—	—	Perform VNR setting as described in section 9.3.3.
5	DPO BASE setting ＊1, ＊2	—	—	Perform DPO BASE setting as described in section 9.18.
6	Other setting ＊1, ＊2	—	—	Referring to the operating instructions, set the other cleared data including the TUNER PRESET data.

Note :
＊1 : Steps 1, 2 and 4 through 6 are related to the information stored in the IC402 non-volatile memory (M6M80021P) of the MICOM•SURROUND assembly. Therefore, perform these steps when the stored data have been cleared by repairing the MICOM • SURROUND assembly or when IC402 has been replaced.
＊2 : Steps 4 through 6 must be done when the MICOM • SURROUND assembly has been replaced. Initial data set at the factory are stored in IC402. Only confirm the data.
＊3 : The items adjusted in steps 1 and 2 usually go out of when the MICOM • SURROUND assembly is replaced. Be sure to adjust them.

9.6 WHEN AV I/O-3P • TUNER ASSEMBLY IS REPAIRED

- Connection diagram is refered to Fig. 9-2.
- Adjustment points and test points (TP) are shown in Fig. 9-9.
- Perform the adjustment set to the TEST mode (Note 1).
- Perform the adjustment by using the channel 9 unless otherwise noted.
- Video and audio input signals are described in the below.

  Ⓝ; No signal

Video signal

V① ; fv = EIA color bar, 60dBμV

V② ; 8ch, unmodulated, 60dBμV

V③ ; 9ch, unmodulated, 60dBμV

Audio signal (MONO)

S① ; f_A = 1kHz, 100% MOD, 54dBμV

S④ ; unmodulated, 54dBμV

Audio signal (STEREO) ;

dbx noise reduction ON, PRE-EMPHASIS ON

S② ; f_A = 300Hz, 30% MOD,
Lch (or Rch) only, 54dBμV

S③ ; f_A = 5kHz, 30% MOD,
Lch (or Rch) only, 54dBμV

Note 1 ;

How to set the TEST mode.

- Short-circuit TP-OPTION and GND in the MICOM• SURROUND assembly. (Fig. 9-9)
- Disconnect the AC power cord from the AC outlet, then connect it again.

How to release the TEST mode.

- Release the short-circuit TP-OPTION and GND in the MICOM • SURROUND assembly.
- Disconnect the AC power cord from the AC outlet, then connect it again.

Video System

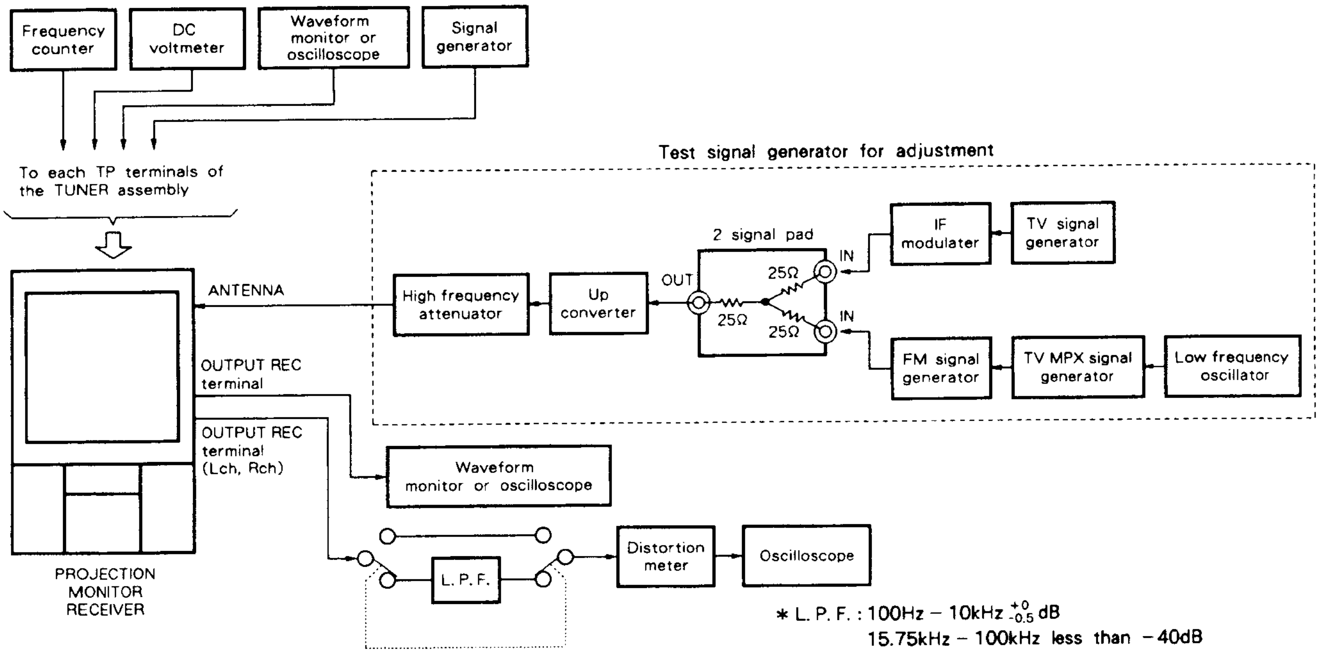
Step No.	Adjustment item	Input signal		Adjustment point	Adjustment procedure
		Video	Audio		
1	Adjacent audio trap	V②	S④	L510 (T)	Adjust TP-IF IN 47.25MHz component to minimum level.
2	Audio trap	V③	S④	L511 (T)	Adjust TP-IF IN 41.25MHz component to minimum level.
3	Synchronous detection	V①	S①	——	Short TP-IF AGC to GND, and measure TP-APC voltage.
4				L504 (T)	Open TP-IF AGC, and adjust the TP-APC voltage to the voltage measured in step 3.
5	RF AGC			VR502 (T)	Adjust the TP-RF AGC voltage to 6.5V.
6	AFT			L506 (T)	Adjust the TP-AFT voltage to 2.5V.
7	VIDEO output			VR501 (T)	Adjust the output level of the OUTPUT REC terminal on the rear panel to 1Vp-p when that terminal is terminated by 75ohms.

Audio System

Step No.	Adjustment item	Input signal		Adjustment point	Adjustment procedure
		Video	Audio		
1	Audio detection	V①	S①	L501 (T)	Adjust the distortion of the OUTPUT REC terminal on the rear panel to minimum level.
2	dbx filter	Ⓝ	Ⓝ	VR506 (T)	Input the signal of 22.9kHz/245mV to TP-COMP IN, and adjust TP-FIL. ADJ output to minimum.
3	VCO	Ⓝ	Ⓝ	——	Measure the DC voltage of TP-MPX VCO with no input signal.
4		Ⓝ	Ⓝ	VR505 (T)	Input the signal of 15.734kHz/48mV to TP-COMP IN, and adjust the DC voltage of TP-MPX VCO to the voltage measured in step 3.
5	Separation	V①	S②	VR504 (T)	Adjust the output of the OUTPUT REC terminal on the rear panel to minimum level.
6			S③	VR503 (T)	
7	Repeat steps 5 and 6 to obtained best separation.				

9.7 WHEN AV I/O-3P · TUNER ASSEMBLY IS REPLACED

- No adjustment required.


Frequency counter
DC voltmeter
Waveform monitor or oscilloscope
Signal generator
To each TP terminals of the TUNER assembly
Test signal generator for adjustment
ANTENNA
OUTPUT REC terminal
OUTPUT REC terminal (Lch, Rch)
PROJECTION MONITOR RECEIVER
High frequency attenuator
Up converter
OUT
2 signal pad
25Ω
25Ω
25Ω
IN
IN
IF modulater
TV signal generator
FM signal generator
TV MPX signal generator
Low frequency oscillator
Waveform monitor or oscilloscope
L. P. F.
Distortion meter
Oscilloscope

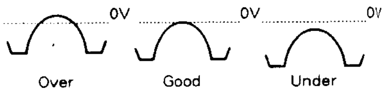
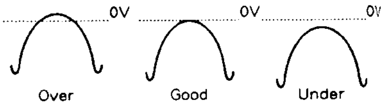
* L. P. F. : 100Hz – 10kHz $^{+0}_{-0.5}$ dB
15.75kHz – 100kHz less than –40dB

Fig. 9-2 Connection diagram when adjusting the tuner section

9.8 WHEN CONVERGENCE ASSEMBLY IS REPAIRED OR REPLACED

9.8.1 PARABOLA WAVEFORM TOP LEVEL ADJUSTMENT

- Adjustment test point (TP) are located in the CONVERGENCE assembly.
- Perform this adjustment only when convergence is shifted.

Step No.	Adjustment item	Adjustment point	Adjustment procedure	
1	TOP LEVEL OF H PARABOLA WAVEFORM	VR701 (C)	At TP701, set the top level of output waveform to 0V ± 20mV.	 0V 0V 0V Over Good Under
2	TOP LEVEL OF V PARABOLA WAVEFORM	VR702 (C)	At TP702, set the top level of output waveform to 0V ± 20mV.	 0V 0V 0V Over Good Under

9.8.2 CONVERGENCE POSITION CONTROL

The convergence position control of this model is performed by using keys on the remote control unit or by using the main unit. Flows of the screen displays and key operations are generalized in Fig. 9-3. For details, refer to the description of the convergence adjustment in the operating instructions. When FACTORY ADJ mode is once activated and deactivated, the convergence position is set to the center of its variable range (the position is reset).

● Description of Fig. 9-3

In ⓑ through ⓔ, a test cross is displayed. The cross is used for simple convergence position adjustment and some other adjustments for which the test cross is required.

In ⓕ through ⓘ, the input signal is displayed as-is, which can be used for the convergence position adjustment by supplying a cross hatch signal.

Note :
- Control by the main unit key

① : Control by SET key
Adjustment ; Control by SELECT/ADJUST + and − keys.
+ key : Moves the upward or to the right.
− key : Moves the downward or to the left.

- Control by the remote control key

② : Control by the numeric keys 2, 4, 6 and 8.
2 : Moves the upward
4 : Moves to the left.
6 : Moves to the right.
8 : Moves the downward.
③ : Control by the numeric key 5.

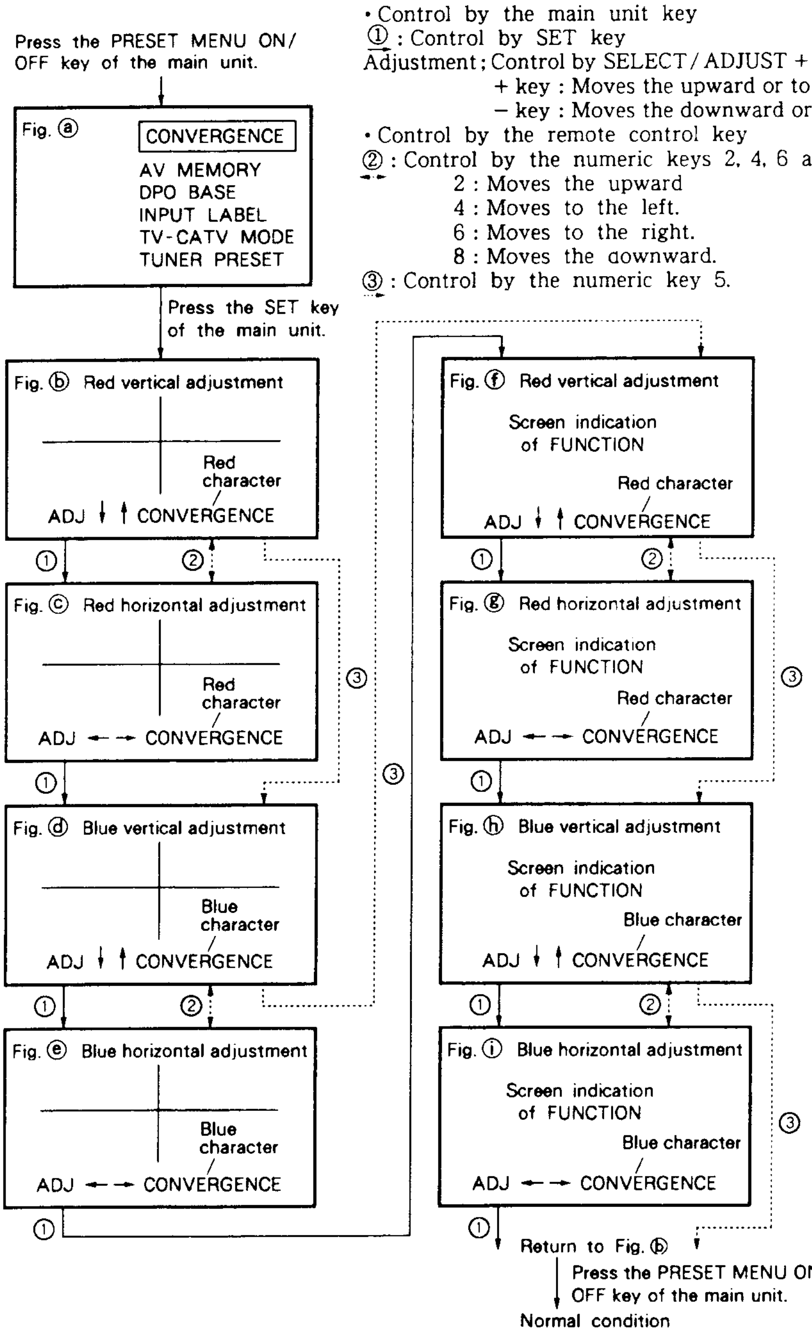

Press the PRESET MENU ON/
OFF key of the main unit.
Fig. ⓐ
CONVERGENCE
AV MEMORY
DPO BASE
INPUT LABEL
TV-CATV MODE
TUNER PRESET
Press the SET key
of the main unit.
Fig. ⓑ Red vertical adjustment
Red character
ADJ ↓↑ CONVERGENCE
Fig. ⓒ Red horizontal adjustment
Red character
ADJ ←→ CONVERGENCE
Fig. ⓓ Blue vertical adjustment
Blue character
ADJ ↓↑ CONVERGENCE
Fig. ⓔ Blue horizontal adjustment
Blue character
ADJ ←→ CONVERGENCE
Fig. ⓕ Red vertical adjustment
Screen indication
of FUNCTION
Red character
ADJ ↓↑ CONVERGENCE
Fig. ⓖ Red horizontal adjustment
Screen indication
of FUNCTION
Red character
ADJ ←→ CONVERGENCE
Fig. ⓗ Blue vertical adjustment
Screen indication
of FUNCTION
Blue character
ADJ ↓↑ CONVERGENCE
Fig. ⓘ Blue horizontal adjustment
Screen indication
of FUNCTION
Blue character
ADJ ←→ CONVERGENCE
①
②
③
Return to Fig. ⓑ
Press the PRESET MENU ON/
OFF key of the main unit.
Normal condition

Fig. 9-3-3 Screen movement

MENU ON/OFF button

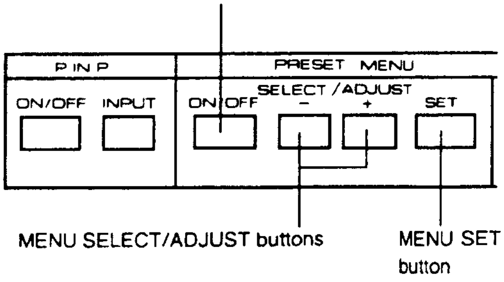

P IN P
PRESET MENU
SELECT /ADJUST
ON/OFF
INPUT
ON/OFF
−
+
SET
MENU SELECT/ADJUST buttons
MENU SET button

Fig. 9-3-1
Key disposition of the main unit

Each time the R/B key is pressed the line (red or blue) to be controlled changes alternately

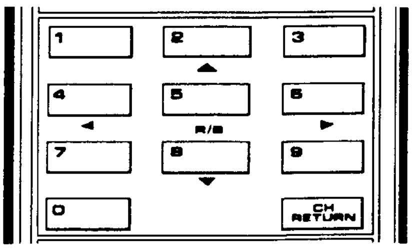

1
2
3
4
5
6
7
8
9
0
R/B
CH RETURN

Fig. 9-3-2
Key disposition of the remote control

9.8.3 CONVERGENCE ADJUSTMENT

- Picture movement and adjustment points are summarized in Fig. 9-4 and 9-5.
- Input signal is the cross-hatch signal.
- Convergence adjustment outline is referred to the Service manual SD-P401/KUX1C (ARP1455), and SD-P40/KU (ARP-977-0), except for H-S-PIN and H-S-LIN adjustments.
- After performed all adjustment, release the short-circuit to obtained white screen and perform the pre-adjustment.
- Correct the vertical line by horizontal correcting signal and correct the horizontal line by vertical correcting signal.
- Adjustment points are located in the CONVERGENCE assembly.

(1) GREEN LINE ADJUSTMENT

- Since the green lines are used as a reference when adjusting red and blue, make sure it is adjusted accurately.
- Short-circuit TP-47R, TP-47B and +12V TP in the VERTICAL•VIDEO•AUDIO assembly, then green lines appear in the screen. Release the short-circuit after green line adjustment.

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	GH-PIN	VR703 (C)	Adjust the green line to a straight line (refer to Fig. 9-4 and 9-5).
2	GH-KEY	VR704 (C)	
3	GV-BOW	VR705 (C)	
4	GV-KEY	VR706 (C)	
5	GV-S-KEY	VR707 (C)	
6	GV-PIN	VR708 (C)	
7	Repeat steps 1 thru 6 until the best possible picture is obtained.		

(2) RED LINE ADJUSTMENT

- Short-circuit TP-47B and +12V TP, then green lines and red lines appear in the screen. Release the short-circuit after red line adjustment.
- Adjust each VR so that the red lines converge with the green lines to obtain yellow lines.
- After adjustmet, perform fine-adjustment by observing the overall screen.

● Red horizontal distortion compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	RH-SKEW	VR709 (C)	Adjust the red vertical lines in the center of the screen to straight lines without distortion and lean. (Refer to Fig. 9-4.)
2	RH-BOW	VR710 (C)	
3	Repeat steps 1 and 2.		
4	RH-KEY	VR711 (C)	Adjust the red vertical lines in the right and left section of the screen to straight lines without lean. (Refer to Fig. 9-4.)
5	RH-S-KEY	VR712 (C)	
6	Repeat steps 4 and 5.		
7	RH-PIN	VR713 (C)	Adjust the red vertical lines in the right and left sections of the screen to straight lines without distortion. (Refer to Fig. 9-4.)
8	RH-S-PIN	VR714 (C)	
9	Repeat steps 7 and 8 or steps 1 thru 8.		

● Red horizontal interval compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	RH-POSITION	Refer to section 9.8.2	Adjust so that the red vertical lines converge with the green vertical lines in the center of the screen to obtain yellow lines. (This serves as the reference setting, but if the lines diverge during the adjustment, proceed with the adjustment after considering this divergence.)
2	RH-LIN	VR715 (C)	Adjust so that the red vertical lines converge with the green vertical lines in the right and left sections of the screen to obtain yellow lines. (Refer to Fig. 9-4)
3	RH-S-LIN	VR716 (C)	
4	RH-SIZE	VR717 (C)	
5	Repeat steps 1 thru 4.		

● Red vertical distortion compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	RV-SKEW	VR718 (C)	Adjust the red horizontal lines in the center of the screen to straight lines without distortion and lean. (Refer to Fig. 9-5.)
2	RV-BOW	VR719 (C)	
3	Repeat steps 1 and 2.		
4	RV-KEY	VR720 (C)	Adjust the red horizontal lines in the lower and upper sections of the screen to straight lines without lean. (Refer to Fig. 9-5.)
5	RV-S-KEY	VR721 (C)	
6	RV-PIN	VR722 (C)	
7	Repeat steps 4 thru 6 or steps 1 thru 6.		

● Red vertical interval compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	RV-LIN	VR723 (C)	Adjust so that the red horizontal lines converge the green horizontal lines in the center of the screen to obtain yellow lines. (This serves as the reference setting, but if the lines diverge during the adjustment, proceed with the adjustment after considering this divergence.) (Refer to Fig. 9-5.)
2	RV-POSITION	Refer to section 9.8.2	
3	RV-SIZE	VR724 (C)	Adjust so that the red horizontal lines converge the green horizontal lines in the lower and upper sections of the screen to obtain yellow lines. (Refer to Fig. 9-5.)
4	Repeat steps 1 thru 3.		

(3) BLUE LINE ADJUSTMENT

- Short-circuit TP-47R and +12V TP, then green lines and blue lines appear in the screen. Release the short-circuit after blue line adjustment.
- Adjust each VR so that the blue lines converge with the green lines to obtain cyan lines.
- After adjustment, perform fine-adjustment by observing the overall screen.

● Blue horizontal distortion compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	BH-SKEW	VR725 (C)	Observe the blue vertical lines in the screen, and adjust in the same way as the red horizontal distortion compensation adjustment.
2	BH-BOW	VR726 (C)	
3	BH-KEY	VR727 (C)	
4	BH-S-KEY	VR728 (C)	
5	BH-PIN	VR729 (C)	
6	BH-S-PIN	VR730 (C)	

● Blue horizontal interval compensation adjustment

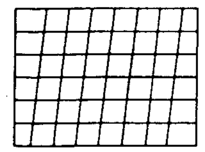
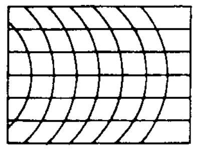
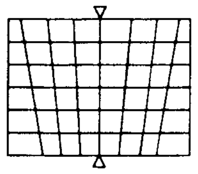
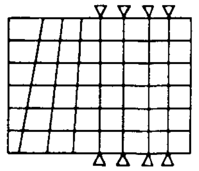
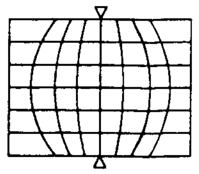
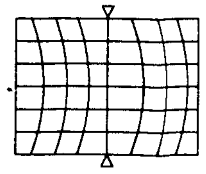
Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	B-H-POSITION	Refer to section 9.8.2	Adjust so that the blue lines converge with the green lines to obtain cyan lines in the same way as the red horizontal interval compensation adjustment.
2	BH-LIN	VR731 (C)	
3	BH-S-LIN	VR732 (C)	
4	BH-SIZE	VR733 (C)	

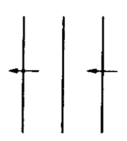
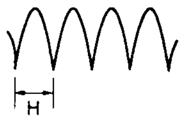
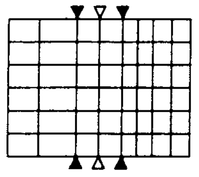
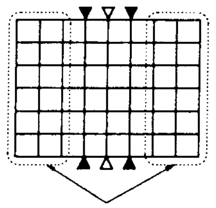
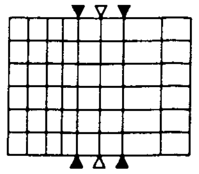
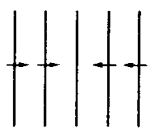
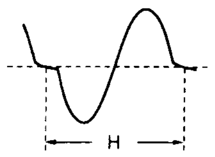
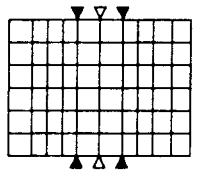
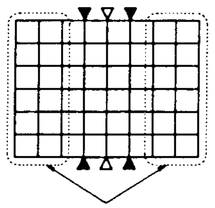
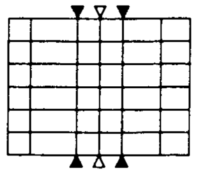
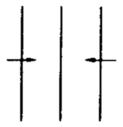
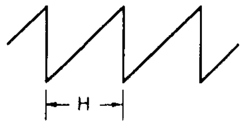
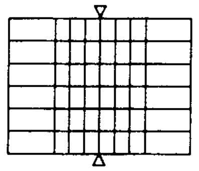
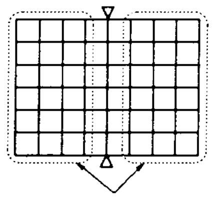
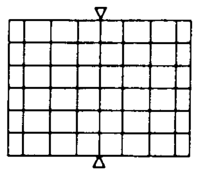
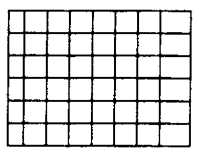
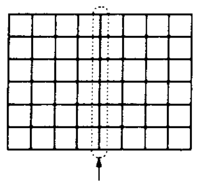
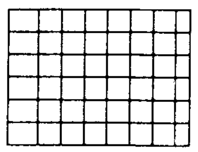
● Blue vertical distortion compensation adjustment

Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	BV-SKEW	VR734 (C)	Observe the blue horizontal lines in the screen, and adjust in the same way as the red vertical distortion compensation adjustment.
2	BV-BOW	VR735 (C)	
3	BV-KEY	VR736 (C)	
4	BV-S-KEY	VR737 (C)	
5	BV-PIN	VR738 (C)	

● Blue vertical interval compensation adjustment

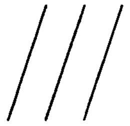
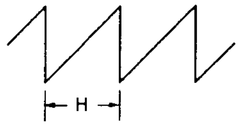
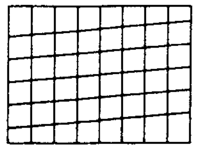
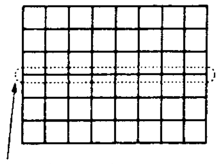
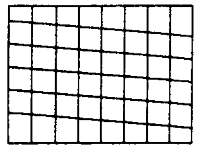
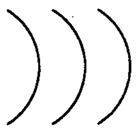
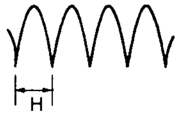
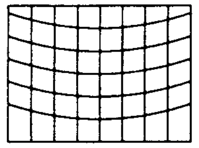
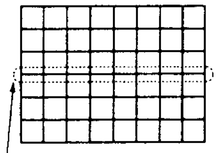
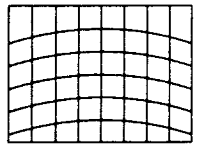
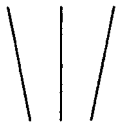
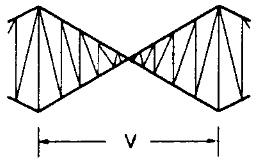
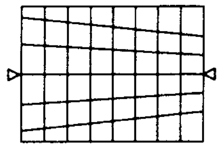
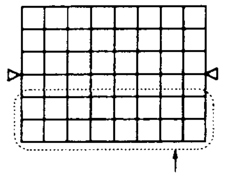
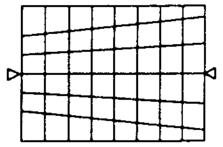
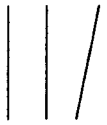
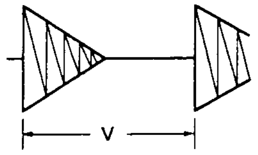
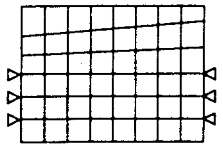
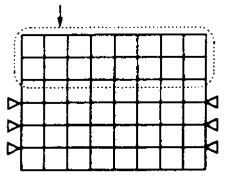
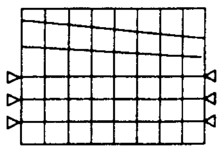
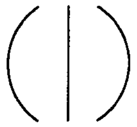
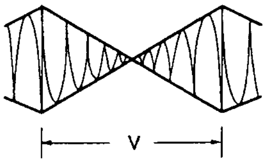
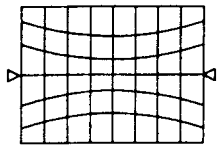
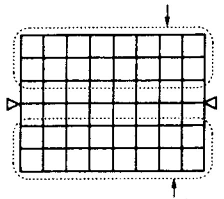
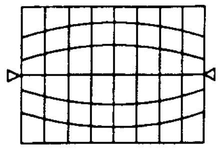
Step No.	Adjustment item	Adjustment point	Adjustment procedure
1	BV-LIN	VR739 (C)	Adjust so that the blue lines converge with the green lines to obtain cyan lines in the same way as the red vertical interval compensation adjustment.
2	BV-POSITION	Refer to section 9.8.2	
3	BV-SIZE	VR740 (C)	

Distorted screen	Adjustment point	
	Observe the vertical lines in the center of the screen (where there is no H-KEY, H-S-KEY, H-PIN nor H-S-PIN movement), then adjust the vertical lines to eliminate lean.	To obtain the best possible lines, adjust the vertical lines in the center of the screen following the adjustment procedure of H-SKEW and H-BOW.
	Observe the vertical lines in the center of the screen, then adjust the bowed lines to straight lines.	
	Observe the vertical lines in the right section of the screen (where there is no H-S-KEY movement), then adjust the vertical lines to eliminate lean.	To eliminate lean, adjust the vertical lines in the right and left sections of the screen following the adjustment procedure of H-KEY and H-S-KEY.
	Observe the vertical lines in the left section of the screen, then adjust the vertical lines to eliminate lean.	
	Observe the vertical lines in the right and left sections of the screen, then adjust the bowed lines to symmetrize the right and left by H-S-PIN. And adjust the bowed vertical lines in the right and left sections of the screen to straight lines by H-PIN.	To eliminate distortion, straighten the vertical lines in the right and left sections of the screen following the adjustment procedure of H-PIN and H-S-PIN.
		

Compensation	Signal and mark *1	Compensating signal	Distorted screen	Corrected screen	Distorted screen	Adjustment point	
Horizontal interval compensation	H-LIN 	 H parabolic wave		 Attention point		Adjust following the adjustment procedure of H-LIN and H-S-LIN (remember the degree of H-SIZE movement) so that the interval between vertical lines on the right section is the same as on the left section, with a central point which does not move. For example, when the vertical lines in the right section of the screen are moved to right direction, move the vertical lines in the left section of the screen as same degree as the gap in the right section to the left direction.	The vertical lines in the center of the screen converge into the green lines by H-POSITION. And also, the vertical lines in the right and left sections of the screen converge into the green lines by H-LIN, H-S-LIN and H-SIZE.
	H-S-LIN 	 H sine wave		 Attention point			
	H-SIZE 	 H sawtooth wave		 Attention point		Converge the vertical lines in the right and left sections of the screen to green lines.	
	H-POSITION	DC voltage		 Center of the screen		The vertical lines of the screen move parallel on the right and left by the convergence control of the remote control or main unit. When the vertical line moves at will, consider the degree of movement.	

Note : KEY is short for KEYSTONE, and LIN for LINEARITY
▽ : denotes points which do not move
▼ : denotes points which hardly move
*1 : Sketch is printed on the p.c. board.

Fig. 9-4 Horizontal compensation

Compensation	Signal and mark ＊1	Compensating signal	Distorted screen	Corrected screen	Distorted screen	Adjustment point	
Vertical distortion compensation	V-SKEW 	 H sawtooth wave		 Attention point		Observe the horizontal lines in the center of the screen (where there is no V-KEY, V-S-KEY nor V-PIN movement), then adjust the horizontal lines to eliminate lean.	To obtain the best possible lines, adjust the horizontal lines in the center of the screen following the adjustment procedure of V-SKEW and V-BOW.
	V-BOW 	 H parabolic wave		 Attention point		Observe the horizontal lines in the center of the screen, then adjust the bowed lines to straight lines.	
	V-KEY 	 V sawtooth wave × H sawtooth wave		 Attention point		Observe the horizontal lines in the lower section of the screen (where there is no V-S-KEY movement), then adjust the horizontal lines to eliminate lean.	To eliminate lean, adjust the horizontal lines in the upper and lower sections of the screen following the adjustment procedure of V-KEY and V-S-KEY.
	V-S-KEY 	 1/2 V sawtooth wave × H sawtooth wave		Attention point 		Observe the horizontal lines in the upper section of the screen, then adjust the horizontal lines to eliminate lean.	
	V-PIN 	 V sawtooth wave × H parabolic wave		Attention point  Attention point		Observe the horizontal lines in the upper and lower sections of the screen, then adjust the bowed lines to straight lines.	To eliminate distortion, straighten the horizontal lines in the upper and lower sections of the screen following the adjustment procedure of V-PIN.

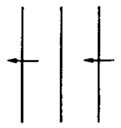
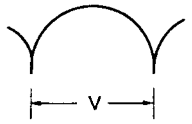
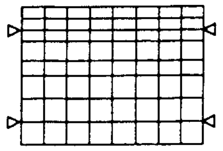
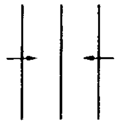
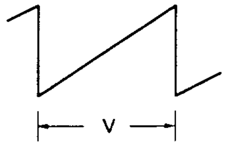
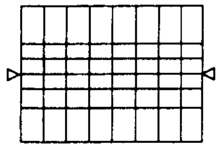
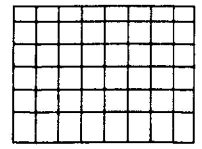
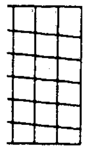
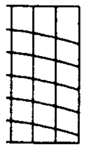
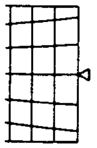
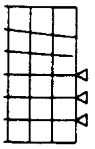
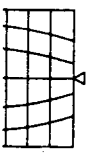
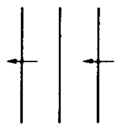
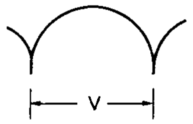
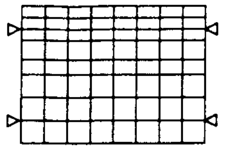
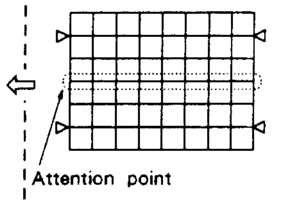
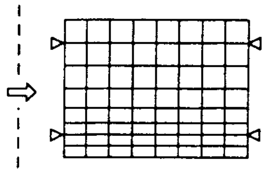
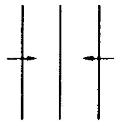
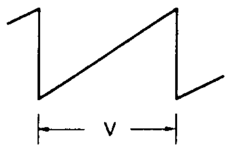
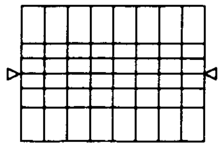
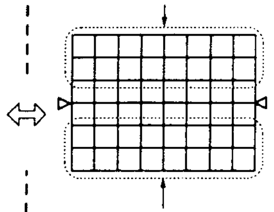
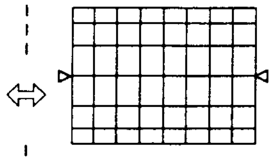
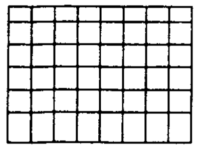
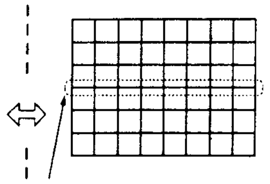
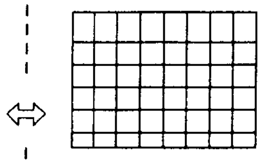
Compensation	Signal and mark ＊1	Compensating signal	Distorted screen	
Vertical interval compensation	＊2 V-LIN 	 V parabolic wave		Atten
	V-S-LIN	No adjustme		
	V-SIZE 	 V sawtooth wave		
	V-POSITION	DC voltage		Cente

Fig. 9-5 Vertical compensation

screen	Adjustment point	
	Observe the horizontal lines in the center of the screen (where there is no V-KEY, V-S-KEY nor V-PIN movement), then adjust the horizontal lines to eliminate lean.	To obtain the best possible lines, adjust the horizontal lines in the center of the screen following the adjustment procedure of V-SKEW and V-BOW.
	Observe the horizontal lines in the center of the screen, then adjust the bowed lines to straight lines.	
	Observe the horizontal lines in the lower section of the screen (where there is no V-S-KEY movement), then adjust the horizontal lines to eliminate lean.	To eliminate lean, adjust the horizontal lines in the upper and lower sections of the screen following the adjustment procedure of V-KEY and V-S-KEY.
	Observe the horizontal lines in the upper section of the screen, then adjust the horizontal lines to eliminate lean.	
	Observe the horizontal lines in the upper and lower sections of the screen, then adjust the bowed lines to straight lines.	To eliminate distortion, straighten the horizontal lines in the upper and lower sections of the screen following the adjustment procedure of V-PIN.

Compensation	Signal and mark *1	Compensating signal	Distorted screen	Corrected screen	Distorted screen	Adjustment point	
Vertical interval compensation	*2 V-LIN 	 V parabolic wave		 		Converge the horizontal lines in the center of the screen into green lines. At this time, be sure to the same horizontal line interval as upper section as lower section about a central point. However, if the same interval is not to obtained, adjust POSITION and adjust V-LIN again.	The horizontal lines in the center of the screen converge into the green line by V-LIN and V-POSITION. And also the horizontal lines in the upper and lower sections of the screen converge into the green line by V-SIZE.
	V-S-LIN	No adjustment				——	
	V-SIZE 	 V sawtooth wave		  		Converge the horizontal lines in the upper and lower sections of the screen into green lines.	
	V-POSITION	DC voltage		 		The horizontal lines of the screen move parallel on the upper and lower by the convergence control of the remote control or main unit. When the horizontal line moves at will, consider the degree of movement.	

Note : KEY is short for KEYSTONE, and LIN for LINEARITY.
▽ : denotes points which do not move.
*1 : Sketch is printed on the P.C. board.
*2 : The movement of V-LIN is the same as the SD-P40/KU.

Fig. 9-5 Vertical compensation

9.9 WHEN FRONT CONTROL ASSEMBLY IS REPAIRED

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	DPO sensitivity adjustment	Adjust DPO sensitivity adjustment as described in section 9.18.		

9.10 WHEN FRONT CONTROL ASSEMBLY IS REPLACED

- No adjustment required.

9.11 WHEN R, G, OR B CRT DRIVE ASSEMBLY IS REPAIRED OR REPLACED

- White balance should require very little adjustment, but if necessary, adjust as described in Section "9.1 When POWER SUPPLY・DEFLECTION assembly is repaired".

9.12 WHEN SUB DEFLECTION ASSEMBLY IS REPAIRED OR REPLACED

- Adjust the horizontal size as described in section 9.1.2, and confirm the vertical size and convergence.

9.13 WHEN CRT ASSEMBLY R, G, OR B IS REPLACED

- The CRT assembly R, G, B replacement procedure is described in Section "10. Replacing the CRT assembly".
- When one or two tubes are replaced, match the new tubes with the remaining tube. If all three tubes are replaced, first adjust G, and then match the other two tubes with the G tube.

Step No.	Adjustment item	Input signal	Adjustment point	Adjustment procedure
1	Deflection yoke angle and centering adjustment	Cross signal (or apply any signal, and generate a test cross signal as described in section 9.8.2.)	Centering magnet of deflection yoke of replaced CRT assembly (Refer to Fig. 9-10)	Adjust the deflection yoke angle until the color cross of the replaced CRT assembly is parallel with the color cross of a CRT assembly which has not been replaced.
				Reset the convergence position (once activate and deactivate FACTORY ADJ mode) when the replaced CRT assembly is red or blue.
				Adjust the centering magnet of the deflection yoke in the replaced CRT assembly until cross becomes converge.
2	Focus adjustment	Cross hatch	Replaced color focus VR (VR1) and lens assembly connected to replaced CRT assembly (Refer to Fig. 9-8 and Fig. 9-11)	Adjust the focus of the replaced CRT assembly to optimum condition. (Shifting the convergence position may provide easier observation. Be sure to return it to the original position after the adjustment is completed.)
3	Convergence adjustment		Match the color convergence of the replaced CRT assembly with the color an assembly which has not been replaced. See Section 9.8.3 CONVERGENCE ADJUSTMENT for details on the matching procedure. (When CRT assembly G is replaced, match the color convergence of the R, G and B.)	
4	White balance	Color bar signal without color signal	Screen VR (VR1) VR105 (R) VR104 (B) } Drive VR (V)	Set the picture quality to standard by remote control.
				Adjust the replaced color screen VR until grey can be seen in the color of dark area.
				Adjust the replaced color drive VR until the color of bright area becomes white. (When CRT. assembly G is replaced, slightly adjust the drive VR [R] and [B].)
				Adjust the PIONEER Standard brightness only when the above adjustments have not been successfully effectuated due to the abnormal brightness.
5	PIONEER standard	Adjust as described in steps 4 thru 10 in Section 9.3.3. Also make the VNR settings according to 9.3.3 when required.		

9.14 WHEN LENS ASSEMBLY IS REPLACED

- Remove the lenticular sheet, and attach tracing paper with a plastic tape, etc. instead. (Refer to Fig. 9-11.) Adjust the focus of the lens assembly newly mounted, by observing the picture shown on the tracing paper.

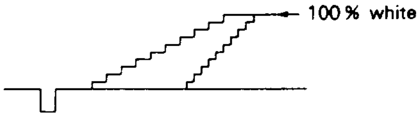
9.15 WHEN PINP OR PINP SUB ASSEMBLIES ARE REPAIRED OR REPLACED (SD-P5047-Q, SD-P5043-K, SD-P5043-Q, PRO-93 AND PRO-73 ONLY)

- Perform this adjustment after completing the assembly adjustments except the PINP assembly and PINP SUB assembly.

*1: Supply the same signal to both the main and sub pictures.

*2 :

- When IC934 (TMC3499PJ) is replaced, perform the adjustment item in step 1 thru 3. In the other case, perform the adjustment from step 4.
- When performing the adjustment in step 1 thru 3, remove the shield cover that cover the IC934 (TMC3499PJ).

Step No.	Adjustment item	*1 Input signal	Adjustment point	Adjustment procedure
1 *2	PLL lock voltage of position setting of the sub-picture	Color bar	TC931 (P)	Adjust the DC voltage between pin 1 of IC934 (or + side of C114) and GND to 2.5V ± 0.3V.
2 *2	PLL lock voltage of chroma regeneration of the sub-picture	Color bar	TC932 (P)	Adjust the DC voltage between pin 92 of IC934 (or lead of R1741 at pin 92 side) and GND to 2.5V ± 0.4V.
3 *2	PLL lock voltage for writing the sub-picture	Monoscope signal	TC933 (P)	Adjust the DC voltage between pin 65 of IC934 (or lead of R1713 at pin 65 side) and GND to 2.5V ± 0.3V. After adjustment, when monoscope 95% line of sub-picture will be seen, readjust to the limits of $2.5V^{+0.3V}_{-0.5V}$. Shift the center of monoscope to the right so that the 95% line is disappeared.
4	Contrast adjustment of sub-picture	10 step scale signal	VR931 (P)	Observe the waveform at pin 7 (Y OUT) of connector W3 of the PINP assembly and adjust the 100% white position of the sub picture so that it aligns with that of the main picture. 
5	White balance adjustment of sub-picture	100% white	VR935 (P)	Adjust the white in the sub picture so that it becomes the same as that in the main picture.
6	Tint adjustment of sub-picture	Color bar	VR933 (P)	Adjust the color level of the sub picture so that it becomes the same as that of the main picture.
			VR934 (P)	Adjust the TINT of the sub picture so that it becomes the same as that of the main picture.

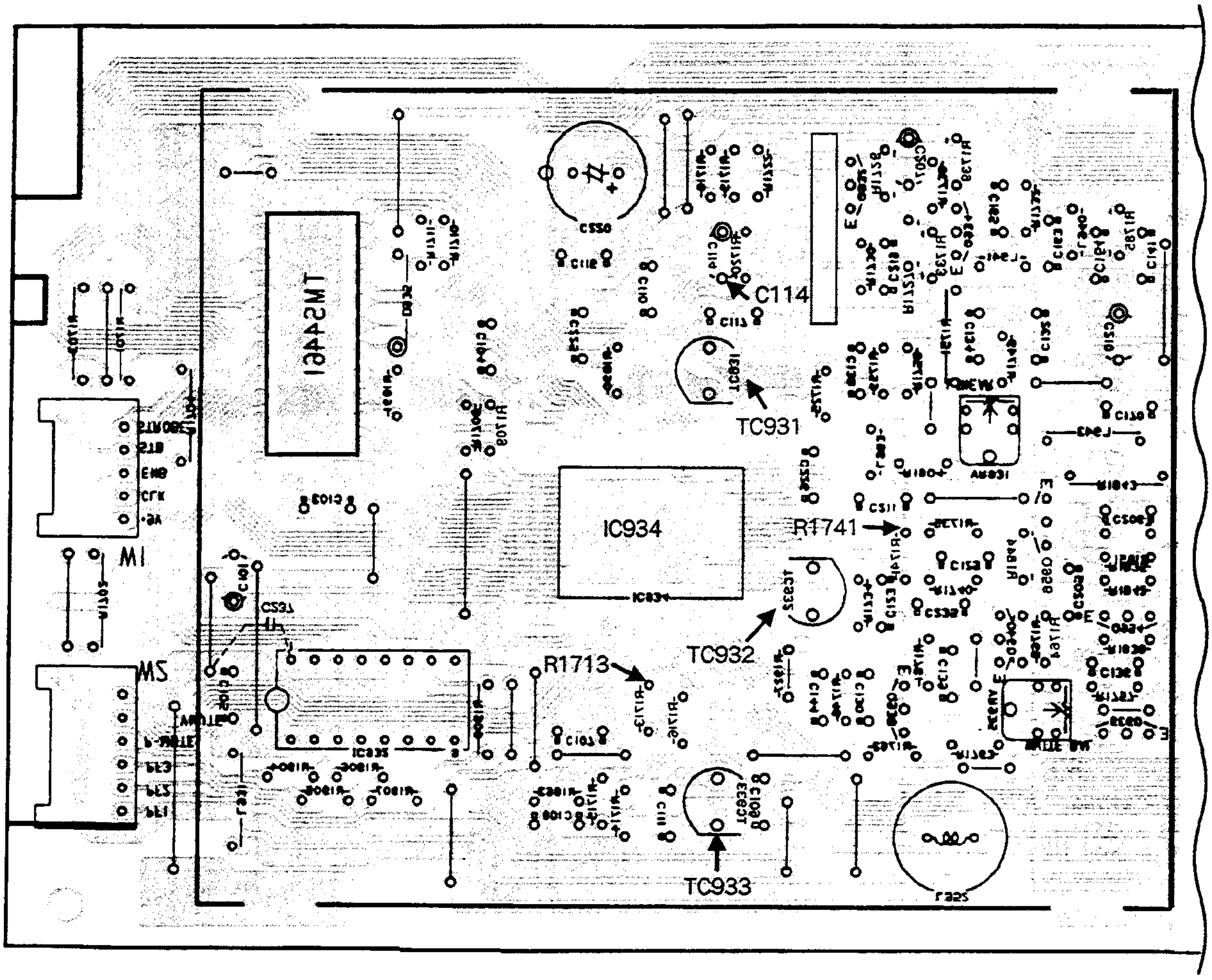

C114
TC931
IC934
R1741
TC932
R1713
TC933
M1
MS
CS50
IC83×

Fig. 9-6 Adjustment points of PINP assembly

9.16 WHEN OTHER ASSEMBLIES ARE REPAIRED OR REPLACED

- No adjustment required.

9.17 DPO BASE SETTING

The DPO function features a DPO light-sensitive section in the front control panel designed to judge the level of external light when the front panel DPO switch (S869) in ON, thereby matching the PROJECTION MONITOR RECEIVER picture quality (contrast, color, bright) with the external light.

There are two STANDARD kinds of DPO picture qualities. When the environment is bright, the first DPO quality (DPO LIGHT) is selected. When the environment is dark, the second DPO quality (DPO DARK) is selected. The data on these two DPO qualities are stored in IC402 (non-volatile memory).

Hence, if IC402 (or peripheral circuits) is repaired or replaced, or if VERTICAL・VIDEO・AUDIO assembly is replaced, picture quality must be stored in IC402 again. To store the DPO picture quality data, refer to the operating instructions. The values set at the factory are shown here for reference. These values are subject to change.

- DPO LIGHT
  COLOR : 0
  CONTR : +5
  BRITE : 0
- DPO DARK
  COLOR : −2
  CONTR : −15
  BRITE : +3

Note: For this adjustment, it is not necessary to activate FACTORY ADJ mode.

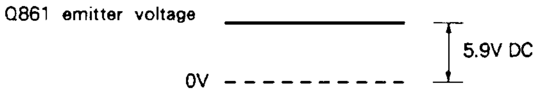
9.18 DPO SENSITIVITY ADJUSTMENT

The sensitivity of the DPO light-sensitive section is adjusted to determine the level of external light at which the DPO feature is activated. This adjustment is made by VR861 in the FRONT CONTROL assembly (refer to Fig. 9-7), and should be carried out according to the customer's preferences. The adjustment procedure used at the factory is given for reference.

(1) Using an incandescent light bulb as the light source, light is beamed directly into the DPO light sensitive section with a light-intensity level of 50 lux at the DPO.

(2) Switch the DPO switch (S869) on. "DPO ON" indicate in the screen.

(3) FRONT CONTROL assembly VR861 is adjusted to obtain a voltage of 5.9V (± 0.1V) at the Q861 emitter.

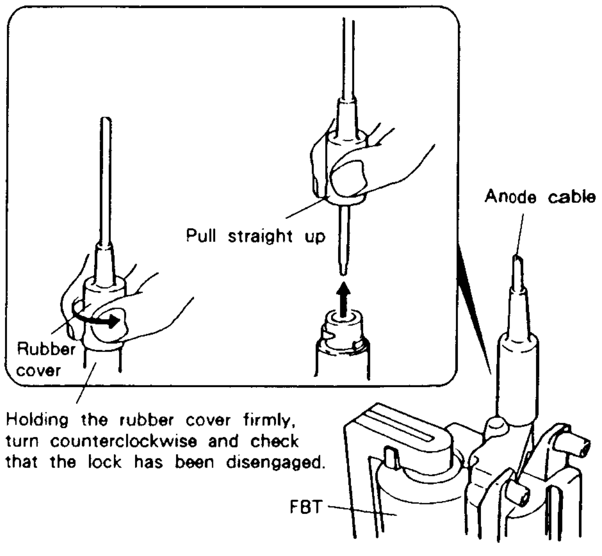


9.19 ANODE CABLE CONNECTION AND DISCONNECTION

SERVICEMAN WARNING

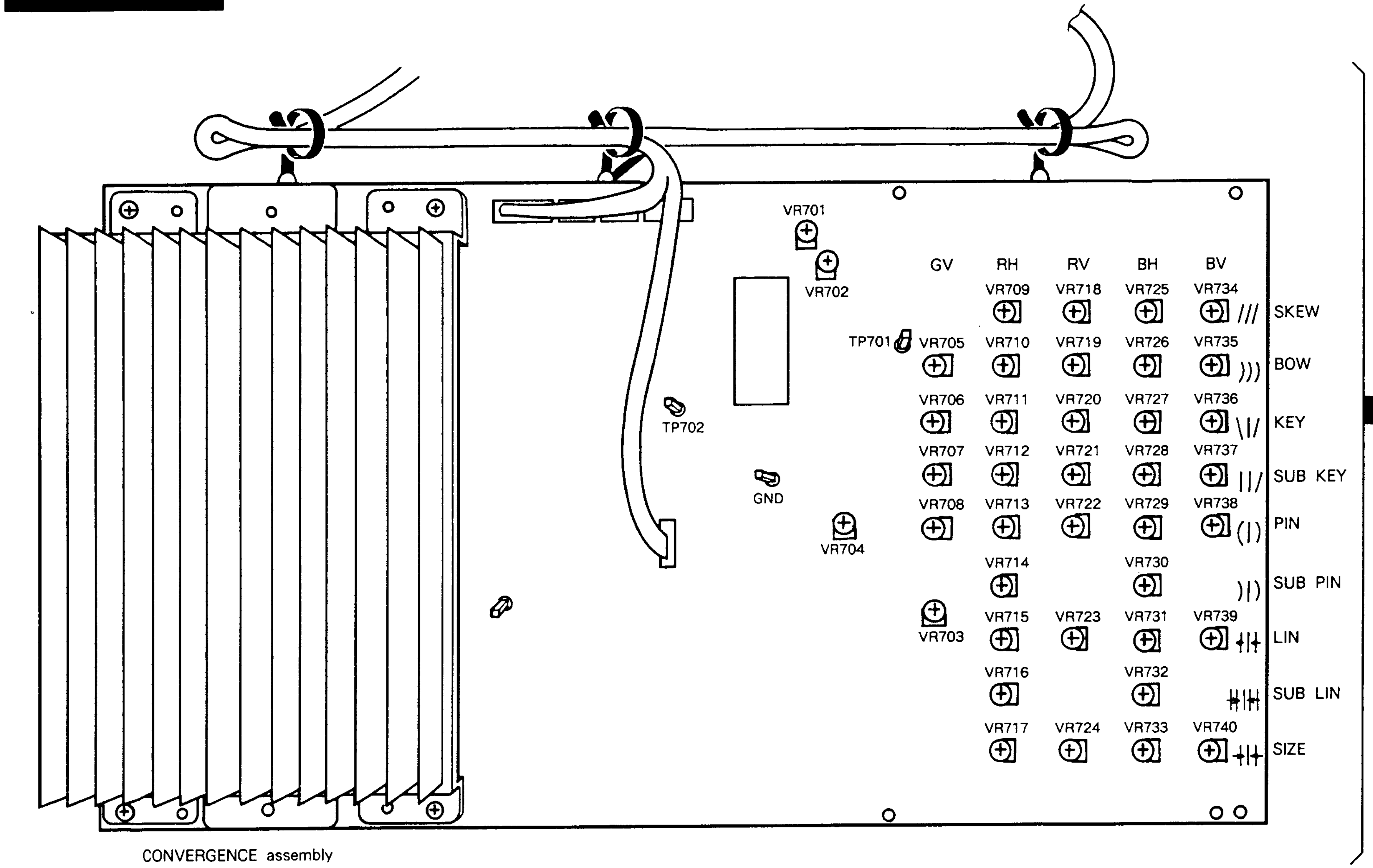
Before removing the anode cable, turn off the power, unplug the AC plug and let the unit discharge for more than 1 minute.

Disconnect the FBT anode cable as outlined in Fig. 9-7. Confirm the extension of the rubber cover before disconnecting the cable, then it is easy to connect the anode cable after the anode voltage is measured. When connecting the anode cable, proceed in the reverse order as mentioned above. Confirm that the cable will not come off by pulling it after the cable is connected.

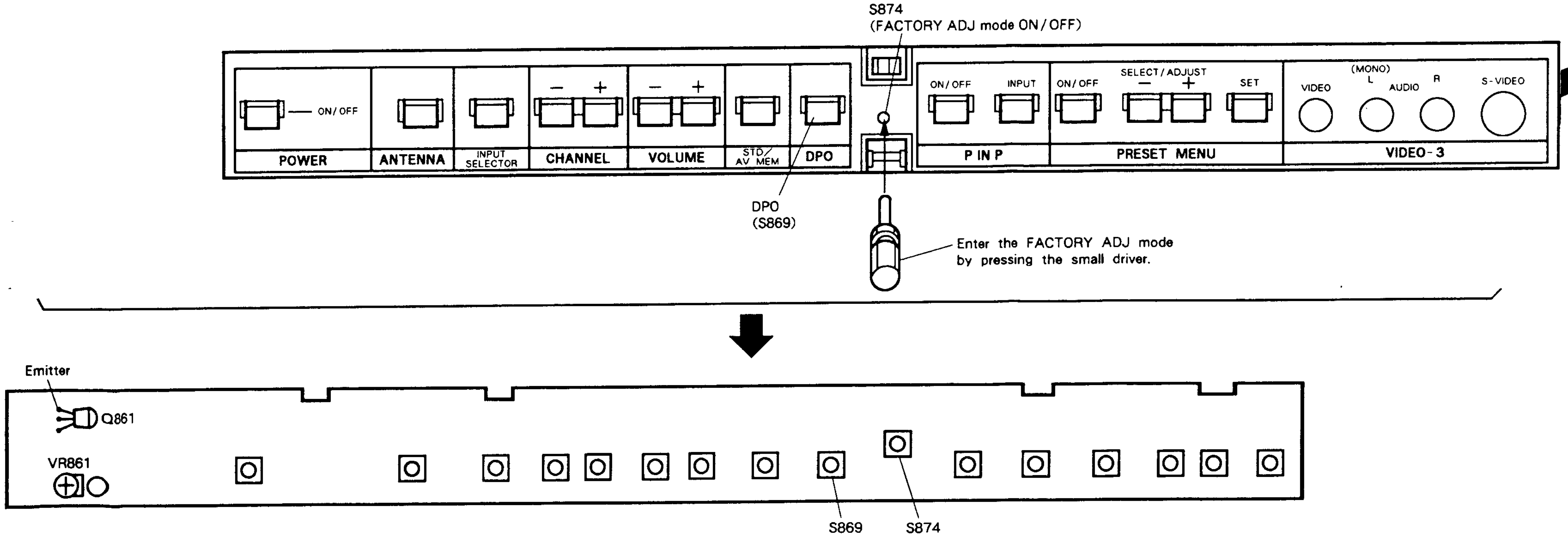


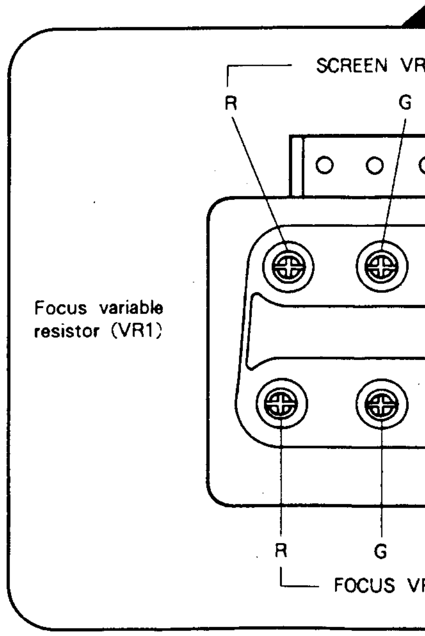
Holding the rubber cover firmly, turn counterclockwise and check that the lock has been disengaged.

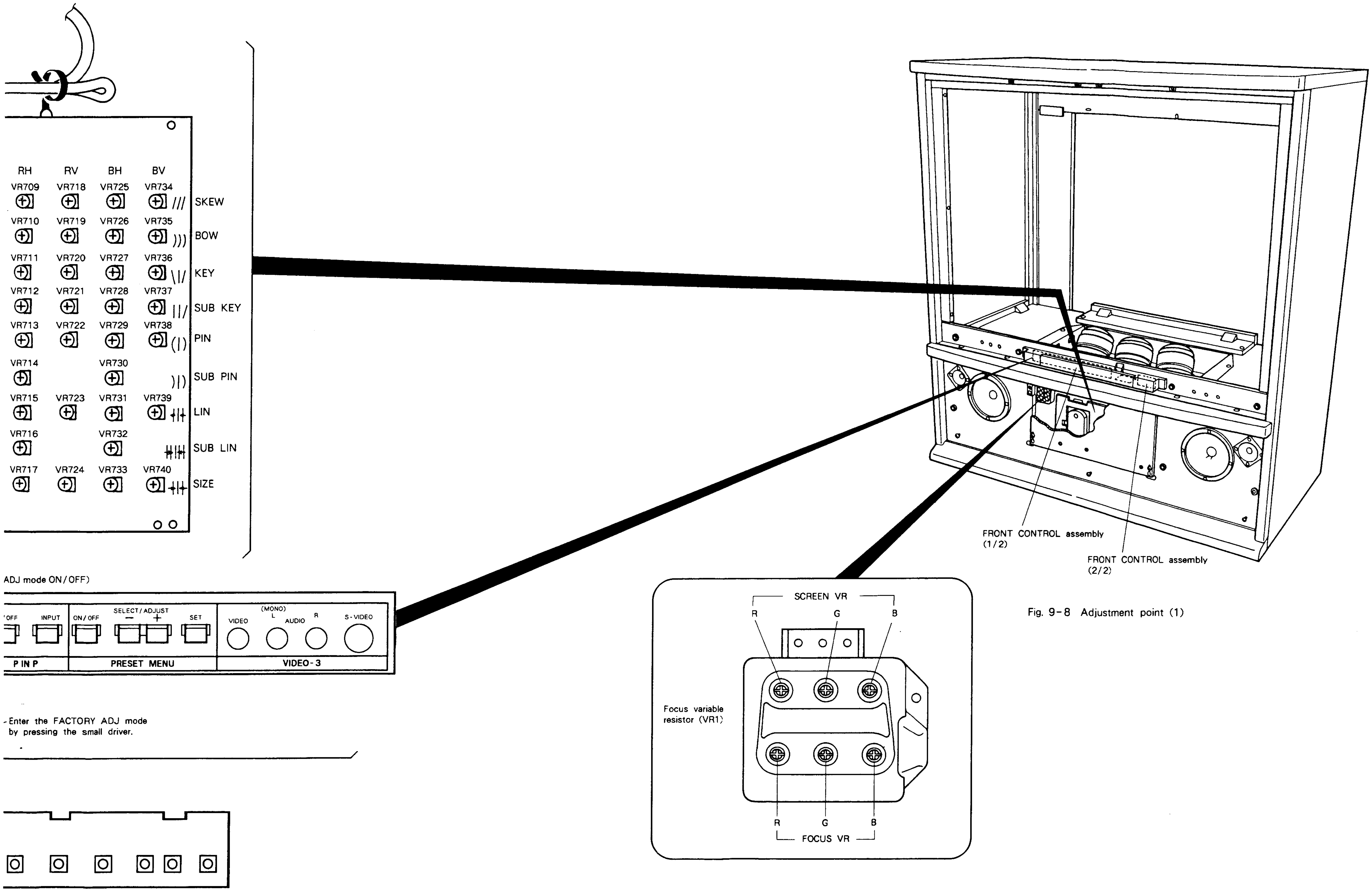
Fig. 9-7 Disconnecting the anode cable


VR701
VR702
TP701
TP702
GND
VR704
VR703
GV
RH
RV
BH
BV
VR709
VR718
VR725
VR734
SKEW
VR705
VR710
VR719
VR726
VR735
BOW
VR706
VR711
VR720
VR727
VR736
KEY
VR707
VR712
VR721
VR728
VR737
SUB KEY
VR708
VR713
VR722
VR729
VR738
PIN
VR714
VR730
SUB PIN
VR715
VR723
VR731
VR739
LIN
VR716
VR732
SUB LIN
VR717
VR724
VR733
VR740
SIZE

CONVERGENCE assembly


S874
(FACTORY ADJ mode ON/OFF)
ON/OFF
POWER
ANTENNA
INPUT SELECTOR
−
+
CHANNEL
−
+
VOLUME
STD/ AV MEM
DPO
ON/OFF
INPUT
P IN P
ON/OFF
SELECT/ADJUST
−
+
SET
PRESET MENU
VIDEO
(MONO)
L
AUDIO
R
S-VIDEO
VIDEO-3
DPO
(S869)
Enter the FACTORY ADJ mode by pressing the small driver.
Emitter
Q861
VR861
S869
S874


SCREEN VR
R
G
Focus variable resistor (VR1)
R
G
FOCUS VR


RH
RV
BH
BV
VR709
VR718
VR725
VR734
SKEW
VR710
VR719
VR726
VR735
BOW
VR711
VR720
VR727
VR736
KEY
VR712
VR721
VR728
VR737
SUB KEY
VR713
VR722
VR729
VR738
PIN
VR714
VR730
SUB PIN
VR715
VR723
VR731
VR739
LIN
VR716
VR732
SUB LIN
VR717
VR724
VR733
VR740
SIZE
ADJ mode ON/OFF)
OFF
INPUT
ON/OFF
SELECT/ADJUST
−
+
SET
(MONO)
L
AUDIO
R
VIDEO
S-VIDEO
P IN P
PRESET MENU
VIDEO-3
FRONT CONTROL assembly (1/2)
FRONT CONTROL assembly (2/2)
SCREEN VR
R
G
B
Focus variable resistor (VR1)
R
G
B
FOCUS VR

-Enter the FACTORY ADJ mode by pressing the small driver.

Fig. 9-8 Adjustment point (1)

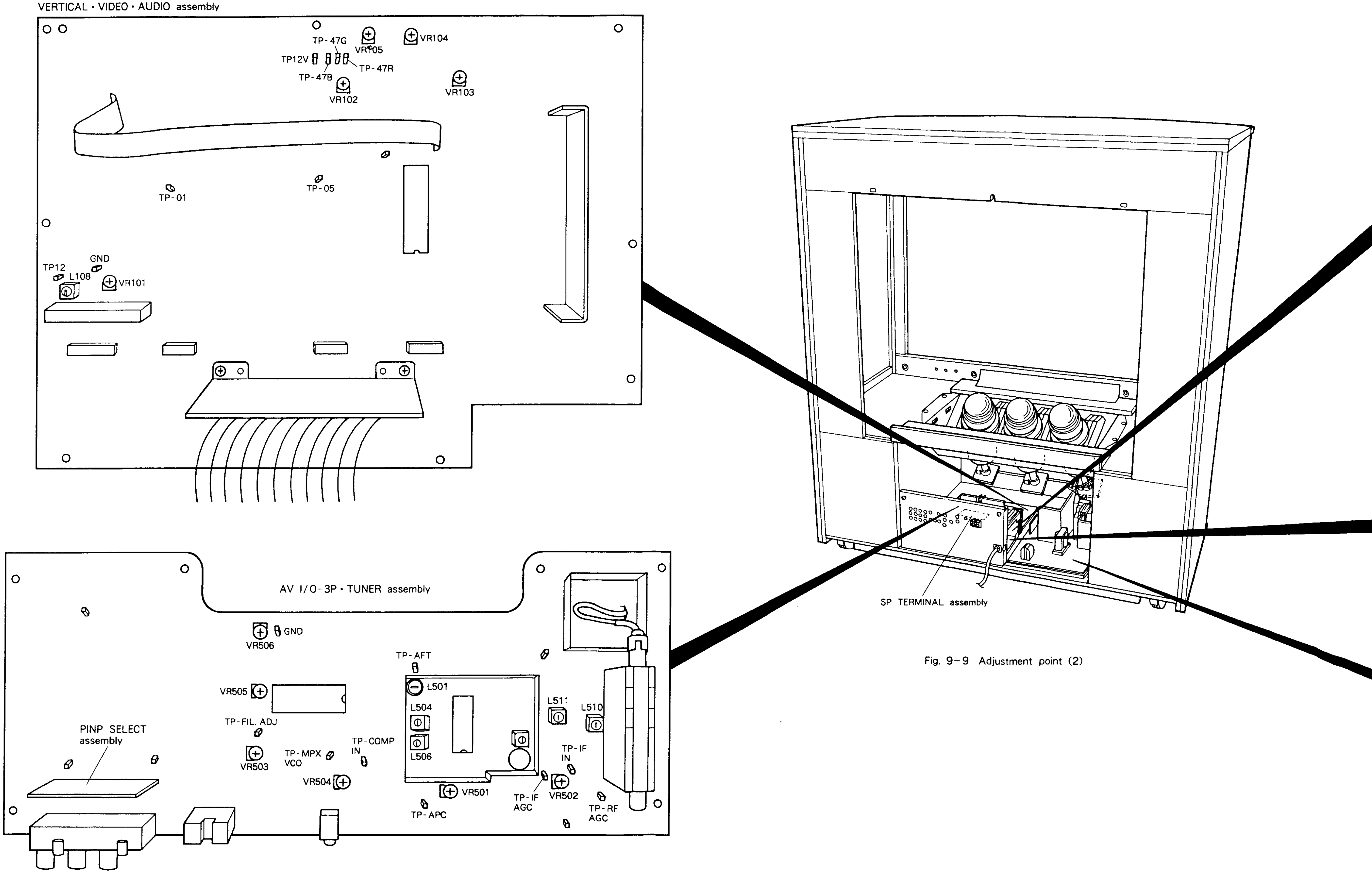
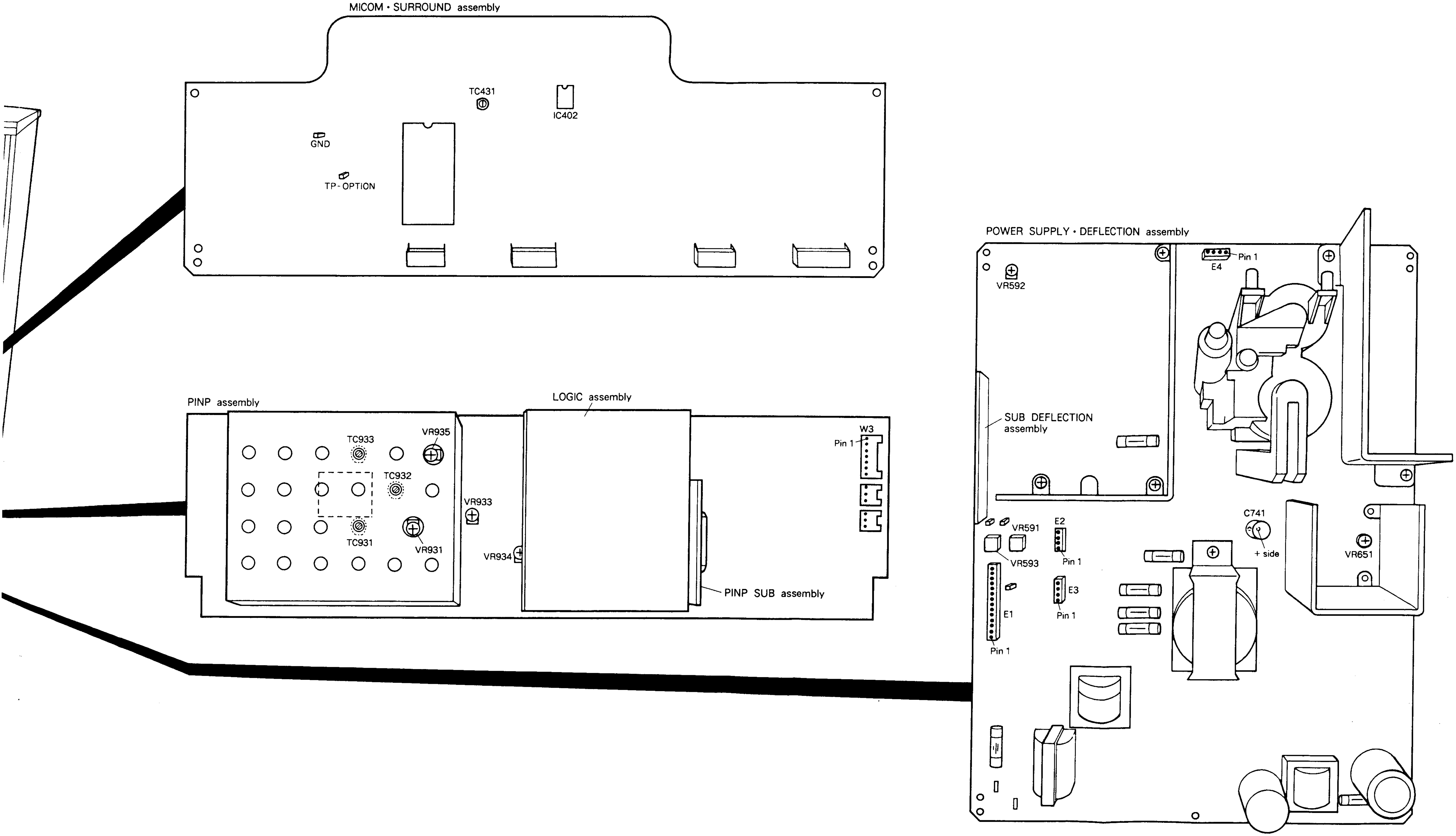

VERTICAL • VIDEO • AUDIO assembly
TP-47G
VR105
VR104
TP12V
TP-47R
TP-47B
VR102
VR103
TP-01
TP-05
TP12
GND
L108
VR101
AV I/O-3P • TUNER assembly
VR506
GND
TP-AFT
L501
VR505
L504
L506
L511
L510
TP-FIL. ADJ
PINP SELECT
assembly
VR503
TP-MPX
VCO
TP-COMP
IN
TP-IF
IN
VR504
VR501
TP-APC
TP-IF
AGC
VR502
TP-RF
AGC
SP TERMINAL assembly

Fig. 9-9 Adjustment point (2)


MICOM • SURROUND assembly
TC431
IC402
GND
TP-OPTION
POWER SUPPLY • DEFLECTION assembly
Pin 1
E4
VR592
SUB DEFLECTION assembly
PINP assembly
LOGIC assembly
TC933
VR935
TC932
VR933
TC931
VR931
VR934
W3
Pin 1
PINP SUB assembly
VR591
E2
VR593
Pin 1
E3
Pin 1
E1
Pin 1
C741
+ side
VR651

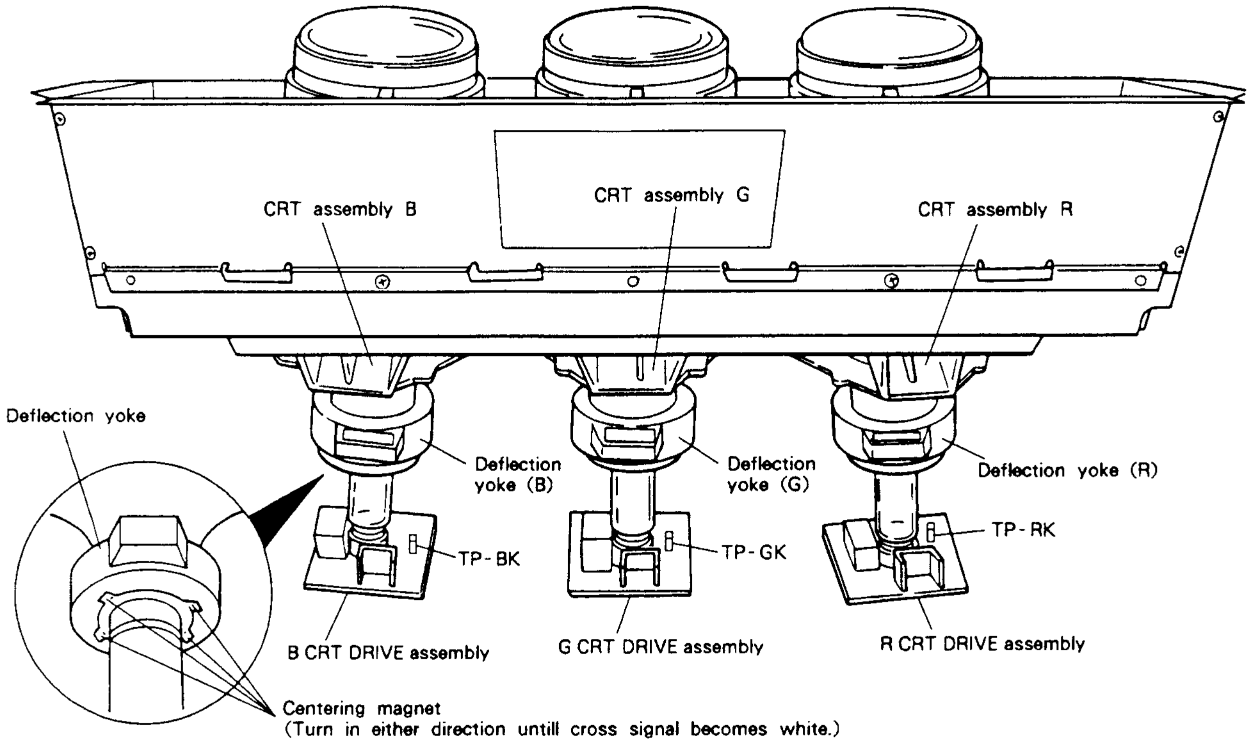

CRT assembly B
CRT assembly G
CRT assembly R
Deflection yoke
Deflection yoke (B)
Deflection yoke (G)
Deflection yoke (R)
TP-BK
TP-GK
TP-RK
B CRT DRIVE assembly
G CRT DRIVE assembly
R CRT DRIVE assembly
Centering magnet
(Turn in either direction untill cross signal becomes white.)

Fig. 9-10 Adjustment point (3)

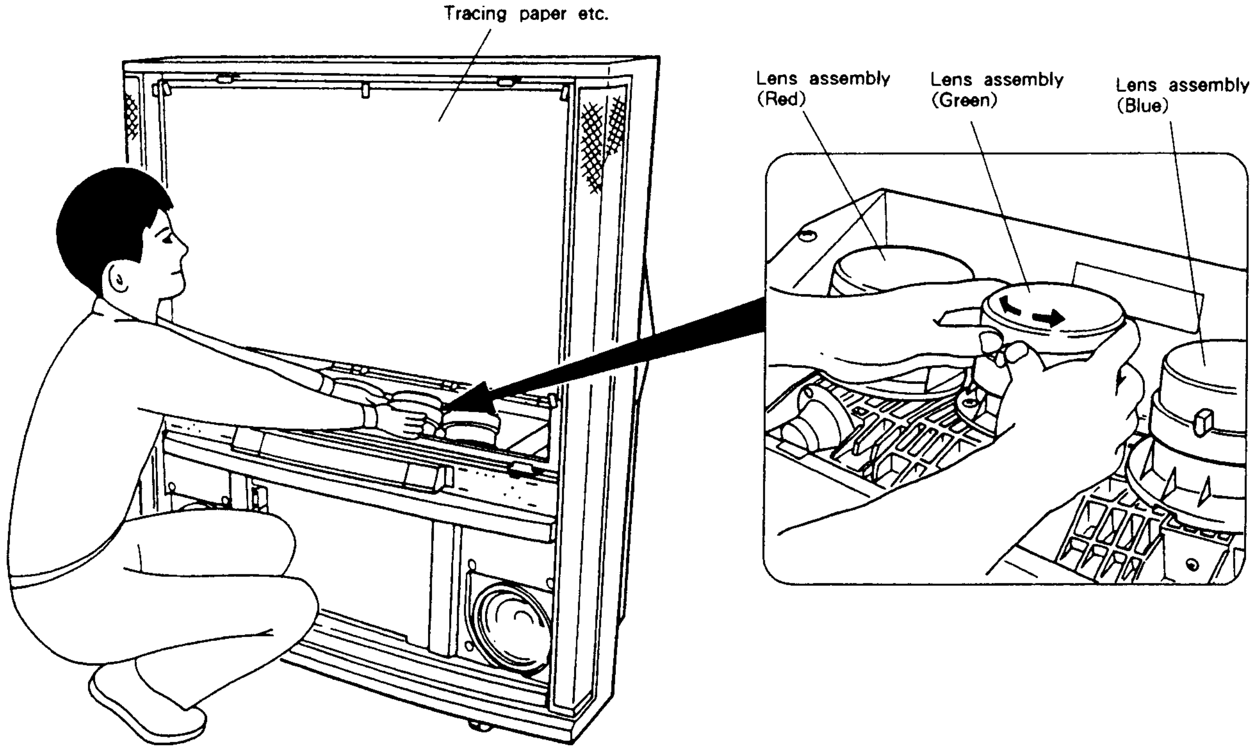

Tracing paper etc.
Lens assembly (Red)
Lens assembly (Green)
Lens assembly (Blue)

Fig. 9-11 Adjustment point (4)

10. REPLACING THE CRT ASSEMBLY

Serviceman Warning

When replacing the CRT assembly, turn off the power, unplug the AC plug and let the unit discharge for more than 1 minute.

The anode cables of the CRT assembly R, G, and B in PROJECTION MONITOR RECEIVER are connected in series as shown in Fig. 10-1.
When replacing the CRT assembly, the anode cable have to be cut.

Note: Since the anode cables for the CRT assembly to service supplies are only available in half lengths, either cut longer lengths, or join older lengths of cable to ensure that the original cable length is used.

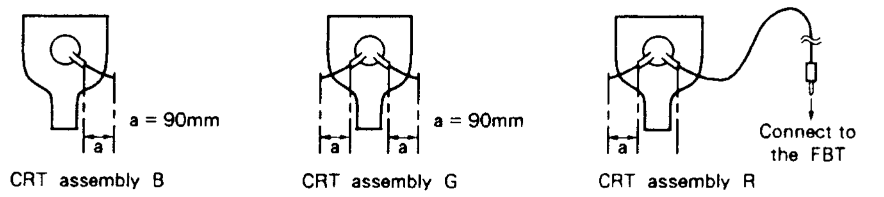
Table 10-1 Cable disconnecting methods

Cable	Replacement CRT assembly		
	When CRT assembly B is replaced	When CRT assembly G is replaced	When CRT assembly R is replaced
Cable ⓐ	——	——	Disconnect the anode cable from the FBT. (Refer to section "9.19 Anode cable connection and disconnection".)
Cable ⓑ	Leave as is	Cut a place 20mm from the exact center towards the CRT assembly G	Cut a place 20mm from the exact center towards the CRT assembly R
Cable ⓒ	Cut a place 20mm from the exact center towards the CRT assembly B	Cut a place 20mm from the exact center towards the CRT assembly G	Leave as is

Note : Do not cut other cables by mistake.

10.1 WHEN REPLACING THE CRT ASSEMBLY

Each CRT assembly supplied as a spare part is as shown below.


a = 90mm
a
a = 90mm
a
a
a
Connect to the FBT
CRT assembly B
CRT assembly G
CRT assembly R

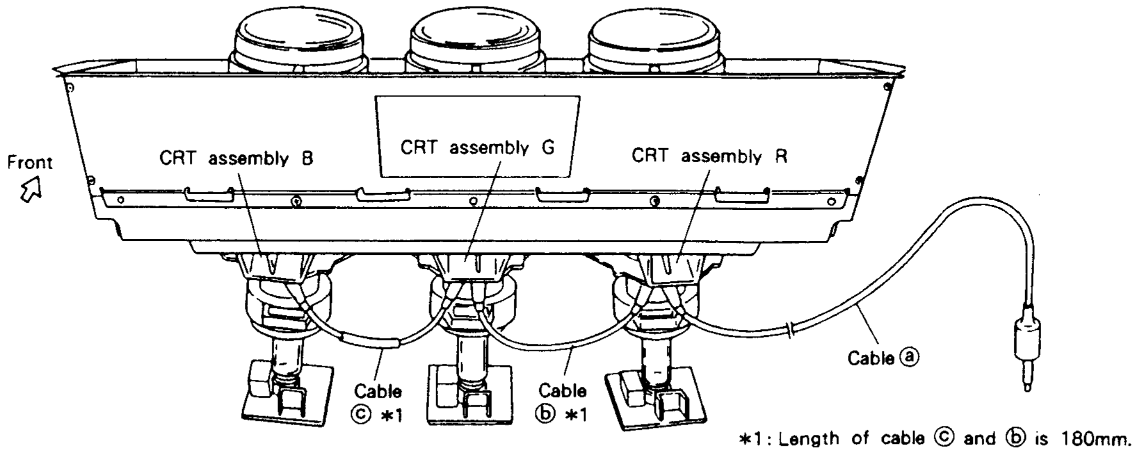

Front
CRT assembly B
CRT assembly G
CRT assembly R
Cable ⓐ
Cable ⓒ *1
Cable ⓑ *1
*1: Length of cable ⓒ and ⓑ is 180mm.

Fig. 10-1 Connection diagram of the each CRT assemblies

10.2 ANODE CABLE SHEATH PEELING

- Peel the sheath of the end of cut anode cable and new anode cable are as follows.
- The anode cable structure is outlined in Fig. 10-2. Note that the sheath consists of two layers.
- The method used to peel the sheath back is illustrated in Fig. 10-3. Use a cutter knife, taking care not to damage the core leads.

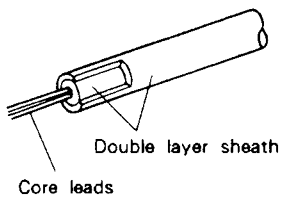
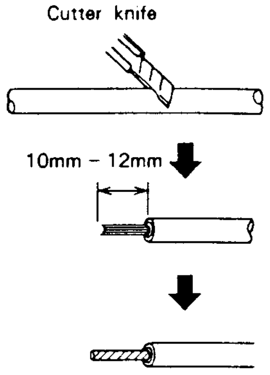

Double layer sheath
Core leads

Fig. 10-2 Anode cable structure


Cutter knife
10mm - 12mm

Using a cutter knife (and taking care not to damage core leads), remove 10 to 12mm of sheath.

Twist core leads

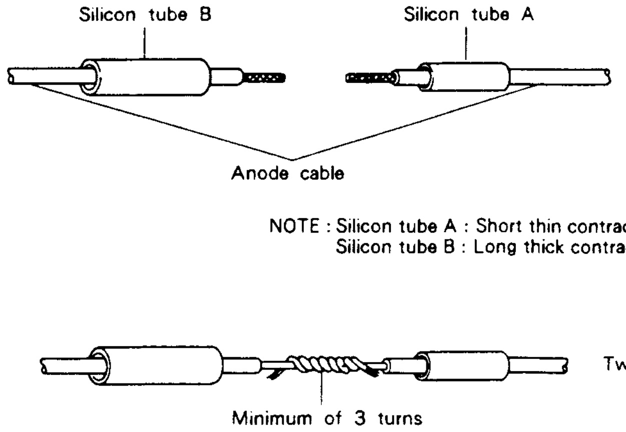
Thread by pre-soldering

Fig. 10-3 Anode cable sheath peeling

10.3 ANODE CABLE JOINING PROCEDURE

- Join the cut anode cable and the new anode cable to restored as shown in Fig. 10-1. Also, when replacing the FBT, refer to section 9.19 "Anode cable connection and disconnection".
- Slip two silicon tubes (silicon tubes A and B in Fig. 10-4) onto the anode cables before making the join.
- Leave the silicon adhesive to harden overnight.
- The silicon adhesive is applied to guard the cable core leads from external air. Apply binder liberally. After completing the joint (at step ⑩ in Fig. 10-4-1 thru 3), make a hole in the silicon adhesive and check that the tube interior cannot be seen.

CAUTION: For the silicon adhesive, be sure to use silicon adhesive part no. GYL-017.

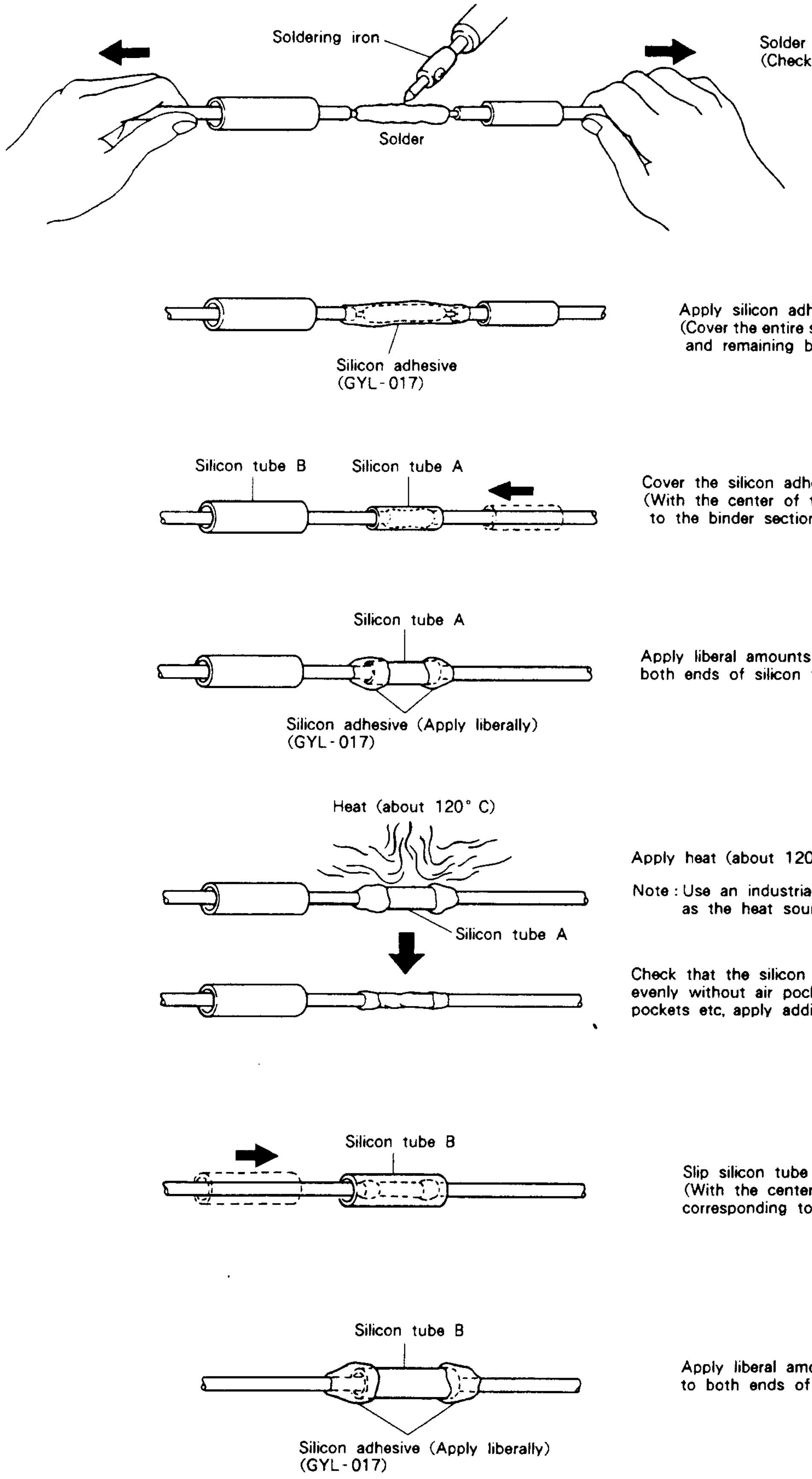

Silicon tube B
Silicon tube A
Anode cable
Minimum of 3 turns

① Slip silicon tube A and B over anode cable (either side)

NOTE : Silicon tube A : Short thin contracting tube } Supplied when ordering CRT assembly
Silicon tube B : Long thick contracting tube } or the anode cable kit.

② Twist cables together through at least 3 turns.

Fig. 10-4-1 Anode cable joining procedure (1)


Soldering iron
Solder
Silicon adhesive
(GYL-017)
Silicon tube B
Silicon tube A
Silicon tube A
Silicon adhesive (Apply liberally)
(GYL-017)
Heat (about 120° C)
Silicon tube A
Silicon tube B
Silicon tube B
Silicon adhesive (Apply liberally)
(GYL-017)

③ Solder the joint, and pull at both ends. (Check against faulty soldering.)

④ Apply silicon adhesive liberally. (Cover the entire soldered section and remaining bare core leads.)

⑤ Cover the silicon adhesive section with silicon tube A. (With the center of the silicon tube A corresponding to the binder section)

⑥ Apply liberal amounts of silicon adhesive to both ends of silicon tube A

⑦ Apply heat (about 120° C) to contract silicon tube A.

Note : Use an industrial drier or soldering iron as the heat source.

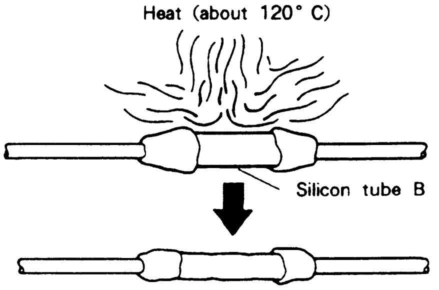
Check that the silicon adhesive has been applied evenly without air pockets etc. If there are any pockets etc, apply additional silicon adhesive.

⑧ Slip silicon tube B over silicon tube A. (With the center of silicon tube B also corresponding to the binder section)

⑨ Apply liberal amounts of silicon adhesive to both ends of silicon tube B.

Fig. 10-4-2 Anode cable joining procedure (2)

⑩

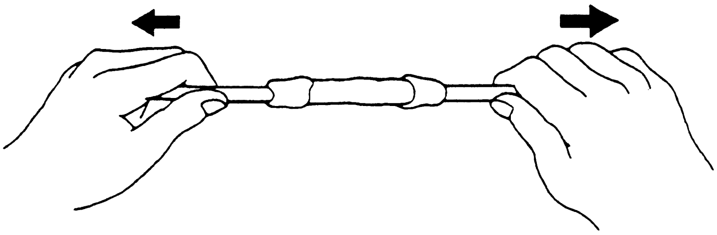


Apply heat (about 120° C) to contract silicon tube B.

Note : Use an industrial drier or soldering iron as the heat source.

Check that the silicon adhesive has been applied evenly without air pockets etc. If there are any pockets etc, apply additional silicon adhesive.

⑪



Gently tug both ends to check that the cables do not separate.

Fig. 10-4-3 Anode cable joining procedure (3)

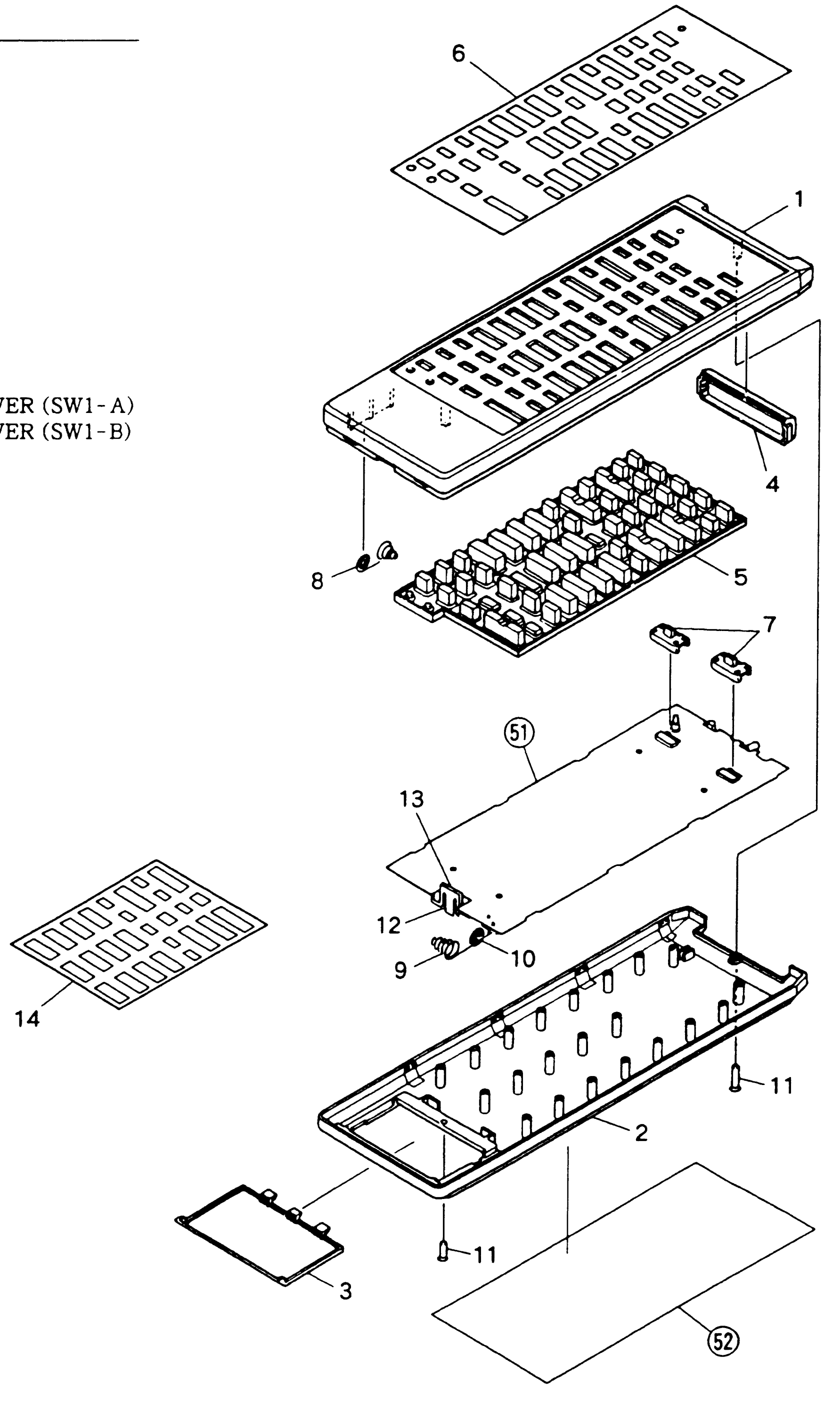
11. REMOTE CONTROL UNIT [CU-SD030 (AXD1155)]

11.1 EXPLODED VIEWS AND PARTS LIST

NOTES :

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Mark	No.	Part No.	Description
	1	AZA1157	Case (A)
	2	AZA1137	Case (B)
	3	AZA1138	Cover
	4	AZA1139	Filter
	5	AZA1253	Rubber sheet
	6	AZA1254	Name plate
	7	AZA1142	Knob (A)
	8	AZB1268	Spring
	9	AZB1269	Spring
	10	AZB1270	Spring
	11	AZA1146	Screw
	12	AZS1084	REMOTE POWER (SW1-A)
	13	AZS1083	REMOTE POWER (SW1-B)
	14	AZA1161	Sheet
	51		PCB board
	52		Label



11.2 ELECTRICAL PARTS LIST

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10^1 → 561 ······························ RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
47k Ω → 47 × 10^3 → 473 ······························ RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5 Ω → 0R5 ······································· RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1 Ω → 010 ·· RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^1 → 5621 ··························· RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC1	PDG060-A
	IC2	AZC1232
	IC3	AZC1231
	Q1	AZC1229
	Q2	AZC1230
	D2	AZC1224
	D4	AZC1225
	D5	AZC1226
	D6 – D12	AZC1228

SWITCHES

Mark	Symbol & Description	Part No.
	S01,S03,S04,S06 Slide switch (SR RECALL/USE/LEARN, VDP/VCR1/VCR2)	AZS1074
	SW1-A (REMOTE POWER)	AZS1084
	SW1-B (REMOTE POWER)	AZS1083

CAPACITORS

Mark	Symbol & Description	Part No.
	C1,C2 (100μF/6.3V)	AZC1253
	C3 (10μF/16V)	AZC1254
	C4,C5 (100pF)	AZC1222
	C6,C8 – C10 (0.01μF)	AZC1220
	C7 (1000pF)	AZC1221

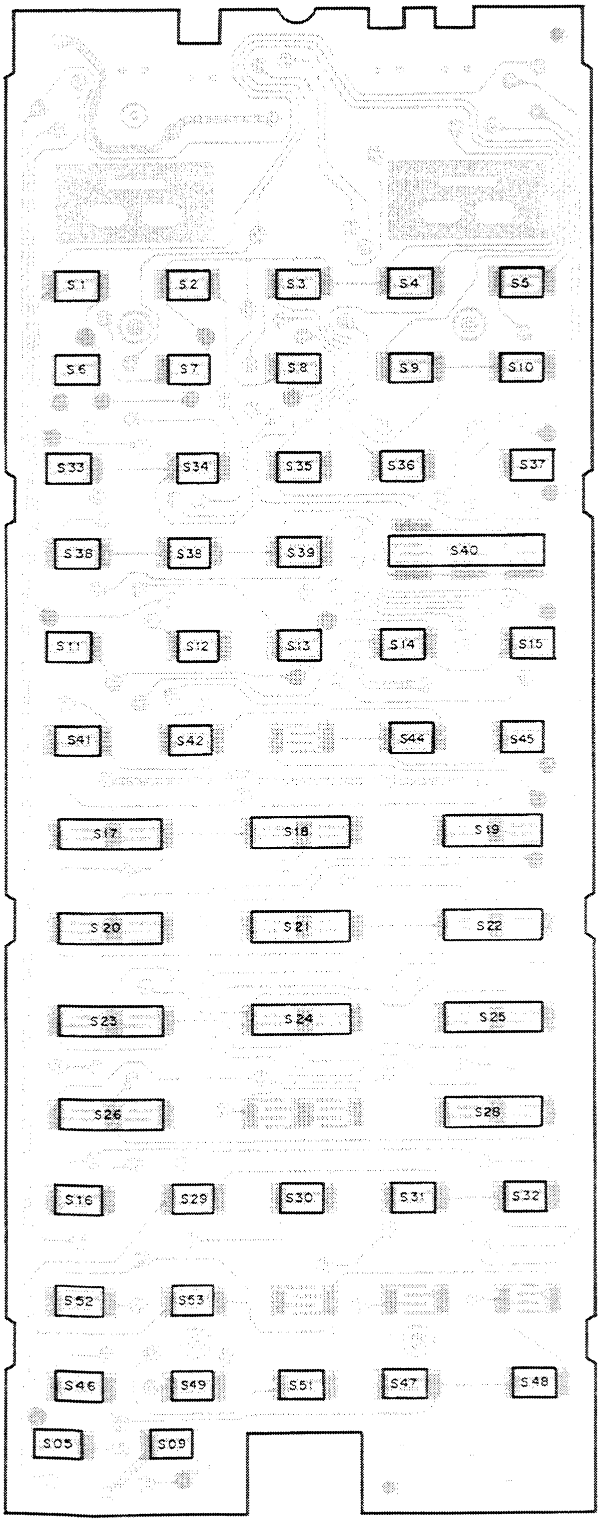
RESISTORS

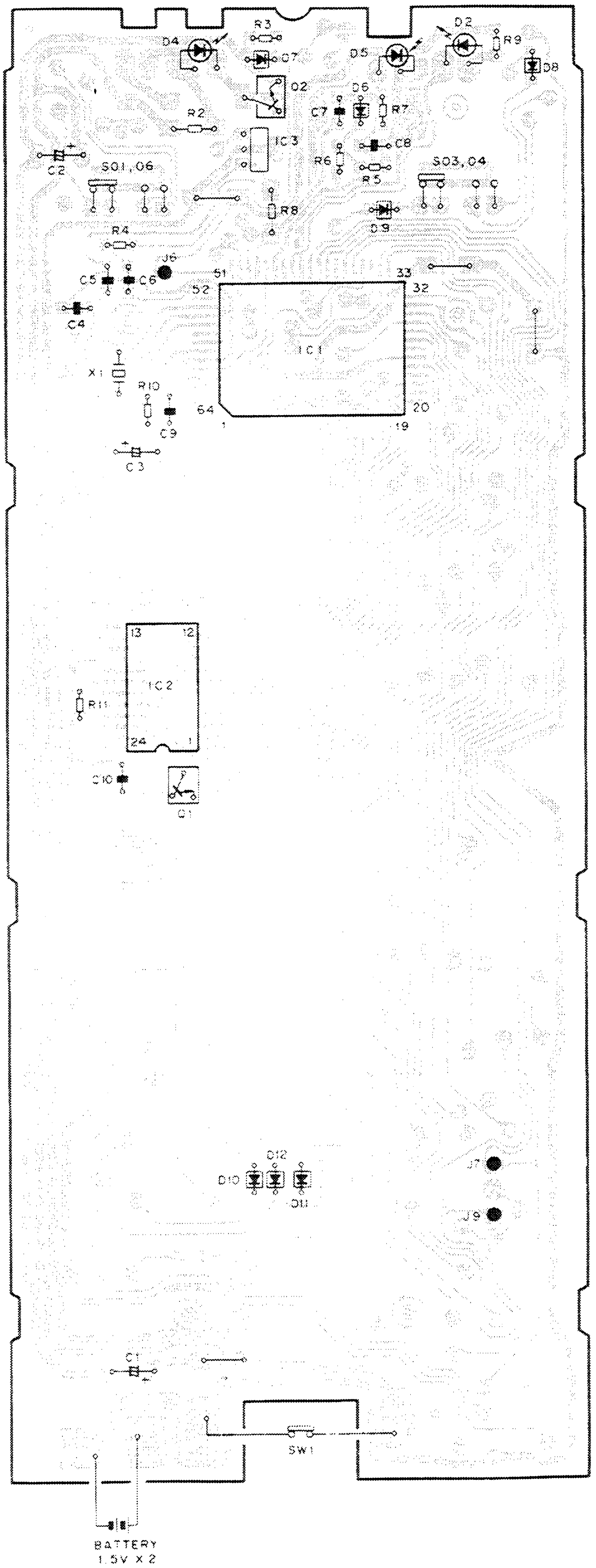
Mark	Symbol & Description	Part No.
	R2 (2.7Ω)	AZC1219
	R3 (100kΩ)	AZC1210
	R4 (680Ω)	AZC1217
	R5 (8.2kΩ)	AZC1214
	R6 (4.7kΩ)	AZC1215
	R7 (33kΩ)	AZC1211
	R8 (1.1MΩ)	AZC1218
	R9 (1kΩ)	AZC1216
	R10 (10kΩ)	AZC1213
	R11 (22kΩ)	AZC1212

OTHERS

Mark	Symbol & Description	Part No.
	X1 (2.0MHz)	AZC1223

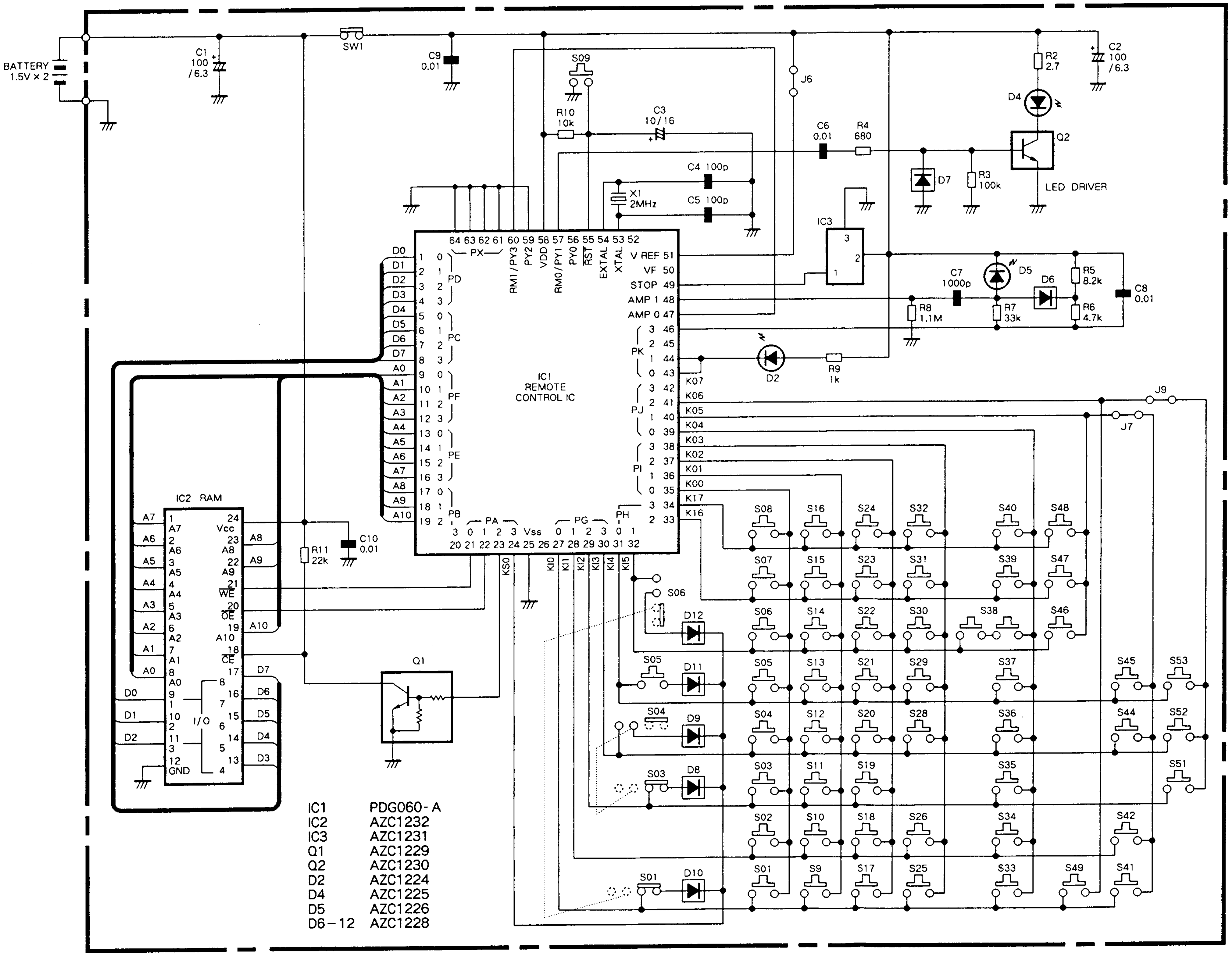
11.3 P. C. BOARDS PATTERN


S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S33
S34
S35
S36
S37
S38
S38
S39
S40
S11
S12
S13
S14
S15
S41
S42
S44
S45
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S28
S16
S29
S30
S31
S32
S52
S53
S46
S49
S51
S47
S48
S05
S09


D4
R3
D7
D5
D2
R9
D8
Q2
D6
C7
R7
R2
IC3
C8
C2
S01,06
R6
S03,04
R5
R8
D9
R4
J6
C5
C6
51
52
33
32
C4
IC1
X1
R10
64
1
C9
20
19
C3
13
12
IC2
R11
24
1
C10
Q1
D12
D10
D11
J7
J9
C1
SW1
BATTERY
1.5V X 2

11.4 SCHEMATIC DIAGRAM

REMOTE CONTROL UNIT (CU-SD030 (AXD1155))


BATTERY 1.5V × 2
C1 100 /6.3
SW1
C9 0.01
S09
R10 10k
C3 10/16
J6
C6 0.01
R4 680
R2 2.7
D4
Q2
LED DRIVER
C2 100 /6.3
D7
R3 100k
C4 100p
C5 100p
X1 2MHz
IC3
C7 1000p
D5
D6
R5 8.2k
R6 4.7k
C8 0.01
R8 1.1M
R7 33k
D2
R9 1k
IC1 REMOTE CONTROL IC
PX PD PC PF PE PB PA PG PH PK PJ PI
RM1/PY3 PY2 VDD RM0/PY1 PY0 RST EXTAL XTAL
V REF VF STOP AMP 1 AMP 0
Vss
K07 K06 K05 K04 K03 K02 K01 K00 K17 K16
KS0 KI0 KI1 KI2 KI3 KI4 KI5
D0 D1 D2 D3 D4 D5 D6 D7
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10
J9
J7
IC2 RAM
Vcc WE OE CE GND I/O
R11 22k
C10 0.01
Q1
S06
D12
S05
D11
S04
D9
S03
D8
S01
D10
S08 S16 S24 S32 S40 S48
S07 S15 S23 S31 S39 S47
S06 S14 S22 S30 S38 S46
S05 S13 S21 S29 S37 S45 S53
S04 S12 S20 S28 S36 S44 S52
S03 S11 S19 S35 S51
S02 S10 S18 S26 S34 S42
S01 S9 S17 S25 S33 S49 S41

IC1	PDG060-A
IC2	AZC1232
IC3	AZC1231
Q1	AZC1229
Q2	AZC1230
D2	AZC1224
D4	AZC1225
D5	AZC1226
D6－12	AZC1228

1. RESISTORS :
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. OTHERS :
   ➡ ; Signal route.
   ⊘ ; Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

4. SWITCHES : (The underlined indicates the switch position)
   SW1 : REMOTE POWER

	VDP	VCR1	VCR2
S01	ON	OFF	OFF
S06	OFF	OFF	ON

	SR RECALL	USE	LEARN
S03	ON	OFF	OFF
S04	OFF	OFF	ON

S05 : M－CLR
S09 : RESET

S1 : TV ⎤ POWER
S2 : VDP
S3 : VCR1
S4 : VCR2 ⎦
S5 : SLEEP
S6 : TV ⎤ INPUT SELECT
S7 : VDP
S8 : VIDEO 1
S9 : VIDEO 2
S10 : VIDEO 3 ⎦
S11 : － ⎤ TV CHANNEL
S12 : ＋ ⎦
S13 : MUTE
S14 : － ⎤ VOLUME
S15 : ＋ ⎦
S16 : P IN P
S17 : 1
S18 : 2
S19 : 3
S20 : 4
S21 : 5
S22 : 6
S23 : 7
S24 : 8
S25 : 9
S26 : 0

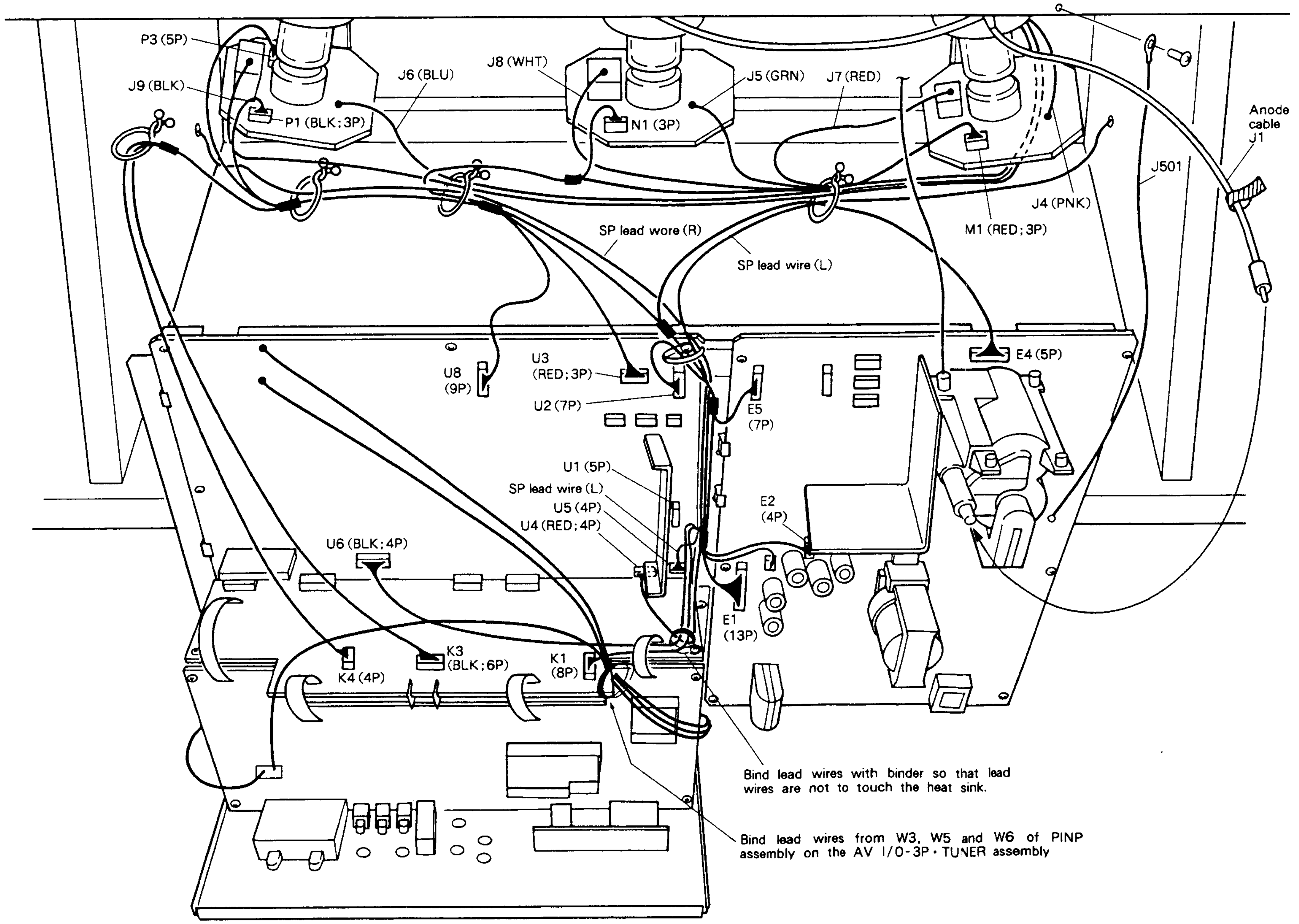
S28 : CH RETURN
S29 : SWAP
S30 : MULTI
S31 : SHIFT
S32 : P IN P INPUT
S33 : CHAP －／CH －
S34 : CHAP ＋／CH ＋
S35 : PAUSE
S36 : REW
S37 : FF
S38 : ····／REC
S39 : STOP
S40 : PLAY
S41 : MTS
S42 : ANT
S44 : D-SOUND EXP.
S45 : DISPLAY
S46 : STD／AV MEMORY
S47 : －
S48 : ＋
S49 : PICTURE
S51 : SOUND
S52 : DPO
S53 : VNR

NOTE :

—▭— : Indicates a chip resistor.
—▮— : Indicates a chip capacitor.
: Indicates a chip transistor.
: Indicates a chip diode.

12. WIRING DIAGRAM

When reassembling the wiring rods of this set once disassembled, be sure to recover the styling of wiring rods as it was. The wiring rods that are the most important for styling are the focus screen wires and the anode cable. The following wiring diagram is provided only for reference, and subject to possible changes without notice. Care should be taken so that the wiring rods styling of this set is recovered as it was before disassembling.

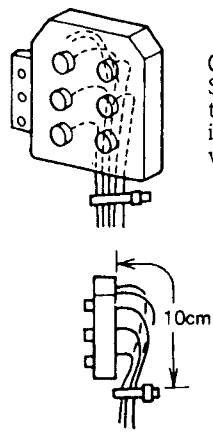

P3 (5P)
J9 (BLK)
P1 (BLK; 3P)
J6 (BLU)
J8 (WHT)
N1 (3P)
J5 (GRN)
J7 (RED)
Anode cable J1
J501
J4 (PNK)
M1 (RED; 3P)
SP lead wore (R)
SP lead wire (L)
E4 (5P)
U8 (9P)
U3 (RED; 3P)
U2 (7P)
E5 (7P)
U1 (5P)
SP lead wire (L)
U5 (4P)
U4 (RED; 4P)
E2 (4P)
U6 (BLK; 4P)
E1 (13P)
K3 (BLK; 6P)
K4 (4P)
K1 (8P)

Bind lead wires with binder so that lead wires are not to touch the heat sink.

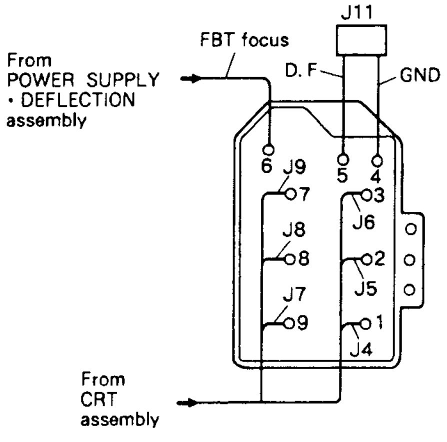
Bind lead wires from W3, W5 and W6 of PINP assembly on the AV I/O-3P・TUNER assembly

Fig. 12-1 Wiring diagram (Inside view 1)

VR1 connection



CAUTION :
Styling lead wires so that terminals are not to bend as illustrated, then bind lead wires with binder.


J11
FBT focus
D. F
GND
From POWER SUPPLY • DEFLECTION assembly
6
J9
5
4
7
3
J8
J6
8
2
J7
J5
9
1
J4
From CRT assembly

WIRING :
1. J4 (Pink W/O cap)
2. J5 (Green W/O cap)
3. J6 (Blue W/O cap)
4. D.F lead (Black W/O cap)
5. D.F lead (Pink W/O cap)
6. FBT focus lead
7. J9 (Black W cap)
8. J8 (White W cap)
9. J7 (Red W cap)
Cap after connection.

CAUTION : Anode cable is not to slacked at the CRT side

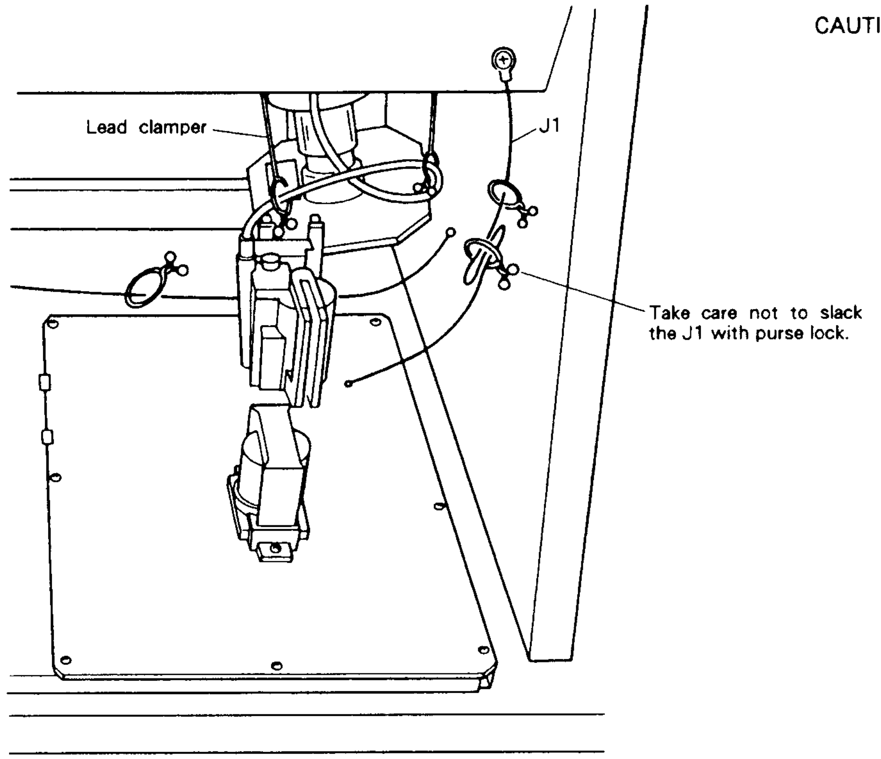
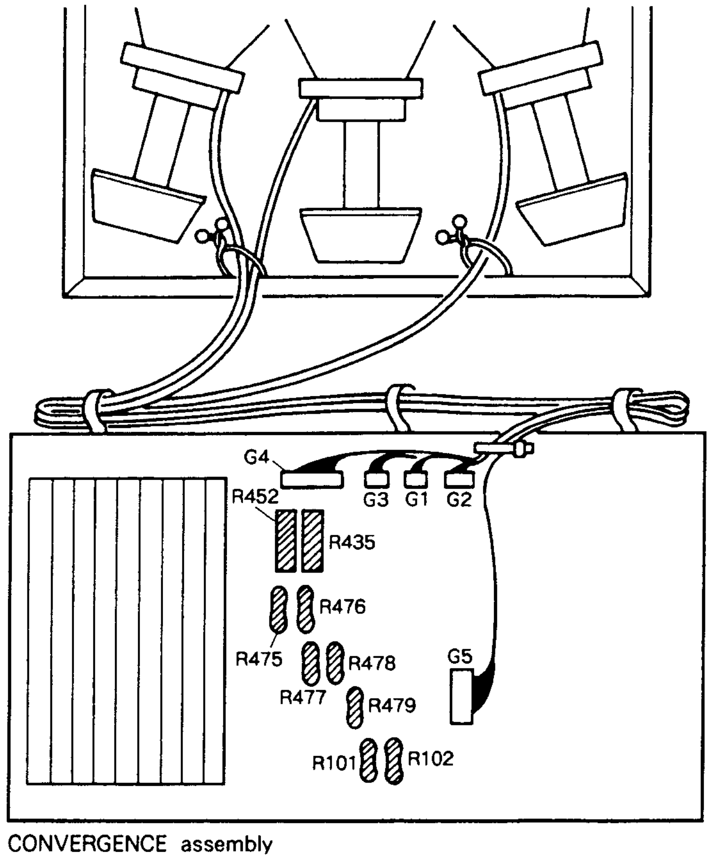

Lead clamper
J1
Take care not to slack the J1 with purse lock.

Fig. 12-2 Wiring diagram (Inside view 2)


G4
R452
G3
G1
G2
R435
R476
R475
R478
G5
R477
R479
R101
R102
CONVERGENCE assembly

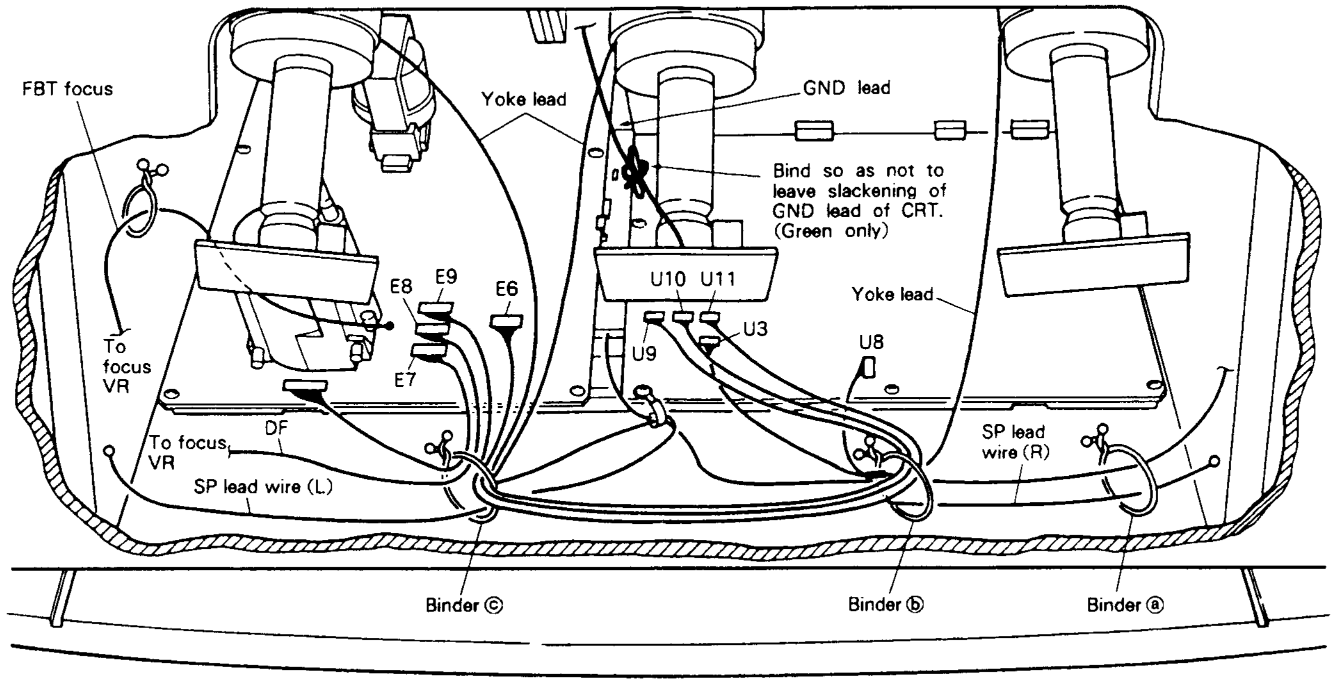
CAUTION :

- Bind lead wires nearby G2 with binder so that lead wires are not to touch the resistors R101, R102, R452, R453 and R475 – R479.
- Bind all lead wires of the CONVERGENCE assembly with binders.

Fig. 12-3 Wiring diagram (Front view 1)

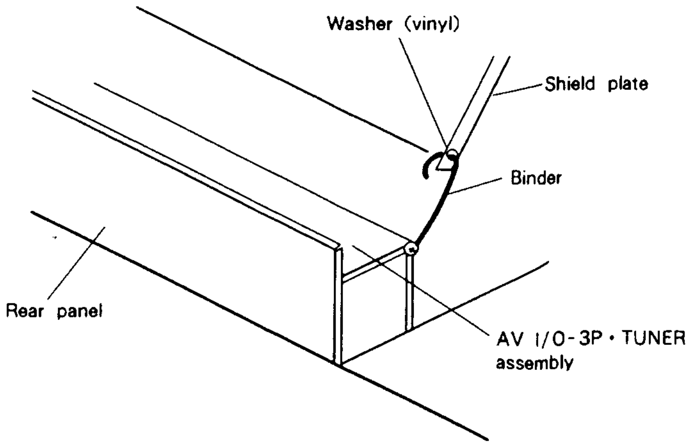
Note :

- Bind lead wires of E7, E8 and E9 (red and black) with binder © so that lead wires are not to slacked.
- Bind lead wires of U9, U10 and U11 (brown and black) with binder ⓑ so that lead wires are not to slacked.
- Bind SP lead wire (L) binder © so that lead wire is not to slacked.
- SP lead wire (R) pass thru the binder ⓐ and ©, and bind lead wire with binder ⓐ so that lead wire is not to slacked.


FBT focus
Yoke lead
GND lead
Bind so as not to leave slackening of GND lead of CRT. (Green only)
E8
E9
E6
U10
U11
Yoke lead
To focus VR
E7
U9
U3
U8
DF
To focus VR
SP lead wire (L)
SP lead wire (R)
Binder ©
Binder ⓑ
Binder ⓐ

CAUTION : When connecting the connectors E7 – E9 and U9 – U11, wiring SP lead wires (L) and (R) so that lead wires are in front of the P. C. board assembly.

Fig. 12-4 Wiring diagram (Front view 2)


Washer (vinyl)
Shield plate
Binder
Rear panel
AV I/O-3P • TUNER assembly

Set the binder through the hole of shield plate and bend it as hold the washer (vinyl).

Fig. 12-5

13. FOR SD-P5043-K, SD-P5043-Q, SD-P504-K, SD-P504-Q, PRO-93 AND PRO-73/KUX1C TYPES

13.1 CONTRAST OF MISCELLANEOUS PARTS

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

  Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5 %, and K = 10 %).

  560 Ω → 56 × 10^1 → 561 ········· RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
  47k Ω → 47 × 10^3 → 473 ········· RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
  0.5 Ω → 0R5 ········· RN2H$\boxed{0}\boxed{R}\boxed{5}$K
  1 Ω → 010 ········· RS1P$\boxed{0}\boxed{1}\boxed{0}$K

  Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62k Ω → 562 × 10^1 → 5621 ········· RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F
- Parts marked by ☆ are important parts which use X – rays.
  If any of these parts need to be replaced, always replace with specified parts.

The SD-P5043-K, SD-P5043-Q, SD-P504-K, SD-P504-Q, PRO-93 and PRO-73/KUX1C types are the same as the SD-P5047-Q/KUX1C type with the exception of the following sections.

Mark	Symbol & Description	Part No.							Remarks
		SD-P5047-Q /KUX1C type	SD-P5043-K /KUX1C type	SD-P5043-Q /KUX1C type	SD-P504-K /KUX1C type	SD-P504-Q /KUX1C type	PRO-93 /KUX1C type	PRO-73 /KUX1C type	
	Door assembly	AAN1214	AAN1218	AAN1218	AAN1212	AAN1212	AAN1230	AAN1232	
	Cushion	AHA1358	AHA1359	AHA1359	• • • • •	• • • • •	AHA1359	AHA1360	For packing
	Under carton	AHD1872	AHD1871	AHD1871	AHD1870	AHD1870	AHD1871	AHD1873	For packing
	Upper carton	AHD1882	AHD1880	AHD1881	AHD1878	AHD1879	AHD1885	AHD1884	For packing
	Door L	AMM1177	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	
	Door R	AMM1178	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	
	Hinge A	ANG1462	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	
	Hinge B	ANG1463	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	
	Screw	ABA1111	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	For hinge A, B
	Cabinet	Non supply	Non supply	Non supply	Non supply	Non supply	Non supply	Non supply	
	Louver	AAP1116	AAP1116	AAP1116	• • • • •	• • • • •	AAP1116	AAP1123	
	Screen frame H	AAP1118	AAP1118	AAP1118	• • • • •	• • • • •	AAP1118	AAP1124	
	Screen frame V	AAP1119	AAP1119	AAP1119	• • • • •	• • • • •	AAP1119	AAP1125	
	Screen frame assembly	• • • • •	• • • • •	• • • • •	AAP1134	AAP1134	• • • • •	• • • • •	
	Screw	ABA1108	ABA1108	ABA1108	• • • • •	• • • • •	• • • • •	• • • • •	
	Screw	ABA1110	ABA1110	ABA1110	• • • • •	• • • • •	ABA1110	ABA1110	
	Plastic rivet	AEC-441	AEC-441	AEC-441	• • • • •	• • • • •	AEC-441	AEC-441	
	Spacer	Non supply	Non supply	Non supply	• • • • •	• • • • •	Non supply	Non supply	For fresnel lens
	PCB support	Non supply	Non supply	Non supply	• • • • •	• • • • •	Non supply	Non supply	
	Side panel assembly	AMB1677	AMB1677	AMB1677	AMB1497	AMB1497	AMB1698	AMB1546	
	Front panel assembly	AMB1675	AMB1675	AMB1675	AMB1671	AMB1671	AMB1697	AMB1697	
	Louver spacer	Non supply	Non supply	Non supply	• • • • •	• • • • •	Non supply	Non supply	
	Grill F45	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	AMM1256	
	Grill R50	AMR2150	AMR2150	AMR2150	• • • • •	• • • • •	• • • • •	• • • • •	
	Grill F50	• • • • •	• • • • •	• • • • •	AMR2151	AMR2151	AMM1255	• • • • •	
	Holder assembly	Non supply	Non supply	Non supply	• • • • •	• • • • •	Non supply	Non supply	
	Holder assembly	Non supply	Non supply	Non supply	• • • • •	• • • • •	Non supply	Non supply	

Mark	Symbol & Description	Part No.							Remarks
		SD-P5047-Q /KUX1C type	SD-P5043-K /KUX1C type	SD-P5043-Q /KUX1C type	SD-P504-K /KUX1C type	SD-P504-Q /KUX1C type	PRO-93 /KUX1C type	PRO-73 /KUX1C type	
	Frame upper holder A	• • • • • •	• • • • • •	• • • • • •	Non supply	Non supply	• • • • • •	• • • • • •	
	Frame upper holder B	• • • • • •	• • • • • •	• • • • • •	Non supply	Non supply	• • • • • •	• • • • • •	
	Frame under holder	• • • • • •	• • • • • •	• • • • • •	Non supply	Non supply	• • • • • •	• • • • • •	
	Cabinet upper holder	• • • • • •	• • • • • •	• • • • • •	Non supply	Non supply	• • • • • •	• • • • • •	
	PCB holder B	Non supply	Non supply	Non supply	• • • • • •	• • • • • •	Non supply	Non supply	
	Operating instructions (English)	ARB1254	ARB1254	ARB1254	ARB1253	ARB1253	ARB1255	ARB1255	
	Technical note	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •	ARB1256	ARB1256	
	PINP assembly	AWZ2954	AWZ2954	AWZ2954	• • • • • •	• • • • • •	AWZ2954	AWZ2954	
	PINP SUB assembly	AWZ3025	AWZ3025	AWZ3025	• • • • • •	• • • • • •	AWZ3025	AWZ3025	
	VERTICAL • VIDEO • AUDIO assembly	AWZ2961	AWZ2961	AWZ2961	AWZ2960	AWZ2960	AWZ2961	AWZ2961	
	FRONT CONTROL assembly	AWZ2967	AWZ2967	AWZ2967	AWZ2966	AWZ2966	AWZ2967	AWZ2967	
	FRONT INPUT TERMINAL assembly	AWZ2969	AWZ2969	AWZ2969	• • • • • •	• • • • • •	AWZ2970	AWZ2970	
	AV I/O-3P • TUNER assembly	AWZ2973	AWZ2973	AWZ2973	• • • • • •	• • • • • •	AWZ2974	AWZ2974	
	AV I/O-2P • TUNER assembly	• • • • • •	• • • • • •	• • • • • •	AWZ2971	AWZ2971	• • • • • •	• • • • • •	
	MICOM • SURROUND assembly	AWZ2977	AWZ2977	AWZ2977	• • • • • •	• • • • • •	AWZ2977	AWZ2977	
	MICOM assembly	• • • • • •	• • • • • •	• • • • • •	AWZ2975	AWZ2975	• • • • • •	• • • • • •	
☆	POWER SUPPLY • DEFLECTION assembly	AWV1146	AWV1146	AWV1146	AWV1145	AWV1145	AWV1146	AWV1146	
	LOGIC assembly	AWZ2955	AWZ2955	AWZ2955	• • • • • •	• • • • • •	AWZ2955	AWZ2955	
	PINP SELECT assembly	AWZ2956	AWZ2956	AWZ2956	• • • • • •	• • • • • •	AWZ2956	AWZ2956	
	SP TERMINAL assembly	AWZ2962	AWZ2962	AWZ2962	AWZ2962	AWZ2962	AWZ3026	AWZ3026	
	Remote control unit (CU-SD030)	AXD1155	AXD1155	AXD1155	• • • • • •	• • • • • •	AXD1155	AXD1155	
	Remote control unit (CU-SD032)	• • • • • •	• • • • • •	• • • • • •	AXD1157	AXD1157	• • • • • •	• • • • • •	
	Cover	AZA1138	AZA1138	AZA1138	PZN1001	PZN1001	AZA1138	AZA1138	For remote control unit
	Screw	BYC40P200FMC	BYC40P200FMC	BYC40P200FMC	• • • • • •	• • • • • •	BYC40P200FMC	BYC40P200FMC	
	Screw	BYC40P220FZK	BYC40P220FZK	BYC40P220FZK	• • • • • •	• • • • • •	BYC40P220FZK	BYC40P220FZK	
☆	Lens assembly 50 (R)	AMR2163	AMR2163	AMR2163	AMR2163	AMR2163	AMR2164	AMR2164	
	Flesnel lens	AMR2154	AMR2154	AMR2154	AMR2154	AMR2154	AMR2154	AMR2155	
	Lenticular sheet	AMR2157	AMR2157	AMR2157	AMR2157	AMR2157	AMR2157	AMR2158	
☆⚠	CRT assembly R	AWY1090	AWY1090	AWY1090	AWY1090	AWY1090	AWY1099	AWY1097	
☆⚠	CRT assembly B	AWY1091	AWY1091	AWY1091	AWY1091	AWY1091	AWY1100	AWY1098	
☆⚠	CRT assembly G	AWY1085	AWY1085	AWY1085	AWY1085	AWY1085	AWY1096	AWY1096	

POWER SUPPLY • DEFLECTION assembly (AWV1145)

The POWER SUPPLY • DEFLECTION assembly (AWV1145) is the same as the POWER SUPPLY • DEFLECTION assembly (AWV1146) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWV1146	AWV1145	
	C734	CCDSL221K500	• • • • • •	
	C735	CEHAQ471M16	• • • • • •	
	D679	RL2Z	• • • • • •	
	L654,L655 Ferrite bead	ATX-028	• • • • • •	

SP TERMINAL Assembly (AWZ3026)

The SP TERMINAL assembly (AWZ3026) is the same as the SP TERMINAL assembly (AWZ2962) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2962	AWZ3026	
	2P pin jack	AKB1126	AKB1155	

FRONT CONTROL Assembly (AWZ2966)

The FRONT CONTROL assembly (AWZ2966) is the same as the FRONT CONTROL assembly (AWZ2967) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2967	AWZ2966	
	S866 Tact switch (ANTENNA)	ASG1034	• • • • • •	

FRONT INPUT TERMINAL Assembly (AWZ2970)

The FRONT INPUT TERMINAL assembly (AWZ2970) is the same as the FRONT INPUT TERMINAL assembly (AWZ2969) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2969	AWZ2970	
	1P pin jack	AKB-104	AKB1111	
	1P pin jack	AKB-105	AKB1112	
	1P pin jack	AKB-106	AKB1113	
	4P mini DIN socket	AKP1016	AKP1051	

MICOM assembly (AWZ2975)

The MICOM assembly (AWZ2975) is the same as the MICOM•SURROUND assembly (AWZ2977) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2977	AWZ2975	
	●SURROUND section			
	C311 – C314	CEAS010M50	• • • • •	
	C316	CEAS102M16	• • • • •	
	C317	CQMA272J50	• • • • •	
	C318,C320	CQMA561J50	• • • • •	
	C319,C330	CQMA822J50	• • • • •	
	C321	CQMA153J50	• • • • •	
	C322	CQMA102J50	• • • • •	
	C323	CQMA273J50	• • • • •	
	C324	CQMA182J50	• • • • •	
	C325	CQMA393J50	• • • • •	
	C326	CQMA272J50	• • • • •	
	C327	CQMA683J50	• • • • •	
	C328	CQMA472J50	• • • • •	
	C329	CFTXA104J50	• • • • •	
	C331	CFTXA184J50	• • • • •	
	C332	CQMA123J50	• • • • •	
	C333	CEAS470M16	• • • • •	
	C334	CEAS220M16	• • • • •	
	C336	CEAS221M16	• • • • •	
	C337,C338	CKDYF103Z50	• • • • •	
	C339 – C342	CEANP010M50	• • • • •	
	C343,C344	CEAS4R7M50	• • • • •	
	D301	RD12ESB3	• • • • •	
	IC301	PA0042	• • • • •	
	IC302	LA3607	• • • • •	
	IC303	M5218L	• • • • •	
	IC304	BU4066BL	• • • • •	
	Q301,Q302	RN1203	• • • • •	
	Q303	RN2203	• • • • •	
	R801 – R804,R812,R813,R820,R825,R826	RD1/8PM223J	• • • • •	
	R805,R806,R811	RD1/8PM473J	• • • • •	
	R807,R808	RD1/8PM331J	• • • • •	
	R809,R810,R814,R830,R832,R833	RD1/8PM104J	• • • • •	
	R815,R816,R829,R831	RD1/8PM102J	• • • • •	
	R817,R827,R828	RD1/8PM103J	• • • • •	
	R818	RD1/8PM222J	• • • • •	
	R821	RD1/8PM333J	• • • • •	
	R822	RD1/8PM153J	• • • • •	
	R819	RD1/4PMFL220J	• • • • •	
	●MICOM section			
	R1253 – R1256,R1290,R1363,R1364,R1366	RD1/8PM222J	• • • • •	
	R1269	RD1/8PM752J	RD1/8PM182J	
	R1270	RD1/8PM682J	RD1/8PM103J	

VERTICAL • VIDEO • AUDIO assembly (AWZ2960)

The VERTICAL•VIDEO•AUDIO assembly (AWZ2960) is the same as the VERTICAL•VIDEO•AUDIO assembly (AWZ2961) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2961	AWZ2960	
	C110	CCDUJ220J50	CQMA681K50	
	C290	• • • • •	CEAS010M50	
	C244,C245	CCDUJ331J50	• • • • •	
	D154,D261	1SS252	• • • • •	
	Q114,Q116,Q255	2SA933S	• • • • •	
	Q253,Q254	2SC3327	• • • • •	
	R106	RD1/8PM332J	RD1/8PM472J	
	R157,R178,R179,R448,R449,R452	RD1/8PM101J	• • • • •	
	R161,R170	RD1/8PM681J	• • • • •	
	R182,R192	• • • • •	RD1/8PM101J	
	R475	RD1/8PM472J	• • • • •	
	R485	RD1/8PM105J	• • • • •	
	R476	RD1/8PM302J	• • • • •	
	R477	RD1/8PM153J	• • • • •	
	R478	RD1/8PM912J	• • • • •	
	R482	RD1/8PM471J	• • • • •	
	R781,R782,R791	RD1/8PM103J	• • • • •	
	R788	RD1/8PM102J	RD1/8PM183J	
	R790	RD1/8PM473J	• • • • •	
	R483	RD1/8PM102J	• • • • •	

AV I/O-3P • TUNER Assembly (AWZ2974)

The AV I/O-3P•TUNER assembly (AWZ2974) is the same as the AV I/O-3P•TUNER assembly (AWZ2973) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2973	AWZ2974	
	12P pin jack	AKB1132	AKB1136	
	3P pin jack	AKB1102	AKB1137	
	Three-4P mini DIN socket	AKP1065	AKP1066	

AV I/O-2P・TUNER Assembly (AWZ2971)

●SD-P504-K AND SD-P504-Q/KUX1C TYPES ONLY

SEMICONDUCTORS

Mark	NO	Description	Part NO.
	IC351	AV SELECTOR IC	PA0044
	IC501		M51365SP
	IC502		NJM78M09A
	IC503	US MPX DECODER IC	CXA1124AS
	IC504		TD6359P
	Q353, 364	TRANSISTOR	2SA933S
	Q501	TRANSISTOR	2SC1740S
	Q502	TRANSISTOR	2SA933S
	Q503	TRANSISTOR	2SC1740S
	Q504	TRANSISTOR	2SA933S
	Q505	TRANSISTOR	2SC2878
	Q506-510	TRANSISTOR	2SC1740S
	Q511	TRANSISTOR	2SA933S
	Q512	TRANSISTOR	RN2203
	Q513	TRANSISTOR	2SC1740S
	Q514, 515	TRANSISTOR	2SC2786
	Q516	TRANSISTOR	RN1201
	Q517	TRANSISTOR	RN1203
	Q518	TRANSISTOR	2SC1740S
	Q519	TRANSISTOR	2SC1740SLN
	Q520-522	TRANSISTOR	2SA933S
	Q525, 526	TRANSISTOR	2SC1740S
	Q527	TRANSISTOR	2SD880
	Q528	TRANSISTOR	2SC1740S
	D352	DIODE	1SS252
	D501-506	DIODE	1SS252
	D507	ZENER DIODE	RD5.6ESB2
	D508	ZENER DIODE	RD30ESB2
	D509	DIODE	1SS252

COILS AND FILTERS

Mark	NO	Description	Part NO.
	L501	FM DETECTION COIL	ATE-067
	L502, 503	AXIAL INDUCTOR	LAU2R2M
	L504	COIL	ATC-249
	L505	AXIAL INDUCTOR	LAU2R2M
	L506	COIL	ATC-226
	L507	AXIAL INDUCTOR	LAU120K
	L508	AXIAL INDUCTOR	LAUR47M
	L509	AXIAL INDUCTOR	LAU1R2M
	L510, 511	COIL	ATC-226
	L512		LAUR22M
	L513, 514	AXIAL INDUCTOR	LAU2R2M
	L515	COIL	ATC-254
	F501	CERAMIC FILTER	ATF-166
	F502	CERAMIC TRAP	ATF-114
	F503	SAW FILTER	ATF1019
	F504	SAW FILTER	ATF1046

CAPACITORS

Mark	NO	Description	Part NO.
	C351	ELECTR. CAPACITOR	CEAS102M10
	C353-356	ELECTR. CAPACITOR	CEAS010M50
	C359, 360	ELECTR. CAPACITOR	CEAS2R2M50
	C361, 362	CERAMIC CAPACITOR	CKDYF103Z50
	C364, 365	ELECTR. CAPACITOR	CEJA220M10
	C367	ELECTR. CAPACITOR	CEAS101M16
	C368, 369	ELECTROLYTIC CAPACIT	CEJA220M10
	C374, 376	ELECTR. CAPACITOR	CEAS010M50
	C379	ELECTR. CAPACITOR	CEAS332M16
	C380-383	CERAMIC CAPACITOR	CKDYF103Z50
	C387	ELECTR. CAPACITOR	CEJA220M10
	C491	AUDIO FILM CAPACITOR	CFTXA473J50
	C492	ELECTR. CAPACITOR	CEAS4R7M50
	C493	ELECTR. CAPACITOR	CEAS101M10
	C494	ELECTR. CAPACITOR	CEAS4R7M50
	C495	MYLOR FILM CAPACITOR	CQMA103J50
	C496	CERAMIC CAPACITOR	CKDYB102K50
	C497	ELECTR. CAPACITOR	CEAS4R7M50
	C498	ELECTR. CAPACITOR	CEAS2R2M50
	C499	ELECTR. CAPACITOR	CEAS470M16
	C500	CERAMIC CAPACITOR	CKDYF473Z50
	C501	CERAMIC CAPACITOR	CKDYB222K50
	C502	ELECTR. (3.3μ/50V)	ACH1128
	C503	MYLOR FILM CAPACITOR	CQMA563J50
	C504	CERAMIC CAPACITOR	CKDYB102K50
	C505	CERAMIC CAPACITOR	CKDYF473Z50
	C506	CERAMIC CAPACITOR	CKDYB222K50
	C507	ELECTR. CAPACITOR	CEAS331M16
	C508	ELECTR. CAPACITOR	CEAS010M50
	C509	ELECTR. CAPACITOR	CEAS2R2M50
	C510	ELECTR. (10μ/50V)	ACH1129
	C511	CERAMIC CAPACITOR	CKDYB392K50
	C512	CERAMIC CAPACITOR	CKDYB102K50
	C513	ELECTROLYTIC CAPACIT	CEANP4R7M50
	C514	CERAMIC CAPACITOR	CKDYF103Z50
	C515	CERAMIC CAPACITOR	CKDYF473Z50
	C517	CERAMIC CAPACITOR	CCMCH050C50
	C518	MYLOR FILM CAPACITOR	CQMA272J50
	C519	CERAMIC CAPACITOR	CKDYF473Z50
	C520	ELECTR. CAPACITOR	CEAS331M16
	C521	CERAMIC CAPACITOR	CKDYF103Z50
	C522	CERAMIC CAPACITOR	CKDYB102K50
	C523	ELECTR. CAPACITOR	CEAS010M50
	C524, 525	CERAMIC CAPACITOR	CKDYF103Z50
	C526	ELECTR. CAPACITOR	CEAS100M50
	C527, 528	ELECTR. CAPACITOR	CEAS470M16
	C529	CERAMIC CAPACITOR	CCDRH270J50
	C530	CERAMIC CAPACITOR	CKDYB102K50
	C531	ELECTR. CAPACITOR	CEAS470M16
	C532	ELECTR. CAPACITOR	CEASR47M50

Mark	NO	Description	Part NO.
	C533	ELECTR. CAPACITOR	CEAS101M10
	C534	CERAMIC CAPACITOR	CKDYF103Z50
	C535	ELECTR. CAPACITOR	CEAS2R2M50
	C536	ELECTR. CAPACITOR	CEANPR22M50
	C537	CERAMIC CAPACITOR	CCMCH150J50
	C538	CERAMIC CAPACITOR	CCDRH560J50
	C539	CERAMIC CAPACITOR	CCDSL820J50
	C540	CERAMIC CAPACITOR	CKDYF103Z50
	C541	ELECTR. CAPACITOR	CEAS4R7M50
	C542	ELECTR. CAPACITOR	CEAS101M10
	C543	CERAMIC CAPACITOR	CKDYB122K50
	C544	MYLOR FILM CAPACITOR	CQMA123J50
	C545	MYLOR FILM CAPACITOR	CQMA562K50
	C546	CERAMIC CAPACITOR	CKDYF103Z50
	C547	ELECTR. CAPACITOR	CEASR47M50
	C548	ELECTR. CAPACITOR	CEAS4R7M50
	C549	ELECTR. CAPACITOR	CEAS2R2M50
	C550	ELECTR. CAPACITOR	CEAS470M16
	C551, 552	CERAMIC CAPACITOR	CKDYB102K50
	C553	ELECTR. CAPACITOR	CEAS101M16
	C554	CERAMIC CAPACITOR	CKDYF103Z50
	C555	CERAMIC CAPACITOR	CKDYB102K50
	C556	ELECTR. CAPACITOR	CEAS4R7M50
	C557	CERAMIC CAPACITOR	CCMCH050C50
	C558	CERAMIC CAPACITOR	CCMCH040C50
	C559	CERAMIC CAPACITOR	CCDRH560J50
	C560	CERAMIC CAPACITOR	CCMCH050C50
	C561	CERAMIC CAPACITOR	CCMCH040C50
	C562	CERAMIC CAPACITOR	CCDSH470J50
	C563	CERAMIC CAPACITOR	CKDYB102K50
	C564	ELECTR. CAPACITOR	CEAS4R7M50
	C565	CERAMIC CAPACITOR	CKDYF103Z50
	C566	MYLOR FILM CAPACITOR	CQMA333J50
	C567	MYLOR FILM CAPACITOR	CQMA154J50
	C568	CERAMIC CAPACITOR	CKDYF103Z50
	C569, 570	CERAMIC CAPACITOR	CCMCH270J50
	C571	CERAMIC CAPACITOR	CKDYF103Z50
	C572	ELECTR. CAPACITOR	CEAS101M10
	C573	CERAMIC CAPACITOR	CCMSL101J50
	C574	CERAMIC CAPACITOR	CKDYB102K50
	C575	ELECTR. CAPACITOR	CEAS102M16
	C576	CERAMIC CAPACITOR	CKDYB102K50
	C577-580	CERAMIC CAPACITOR	CCMSL101J50
	C581, 582	ELECTR. CAPACITOR	CEAS220M16
	C583	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

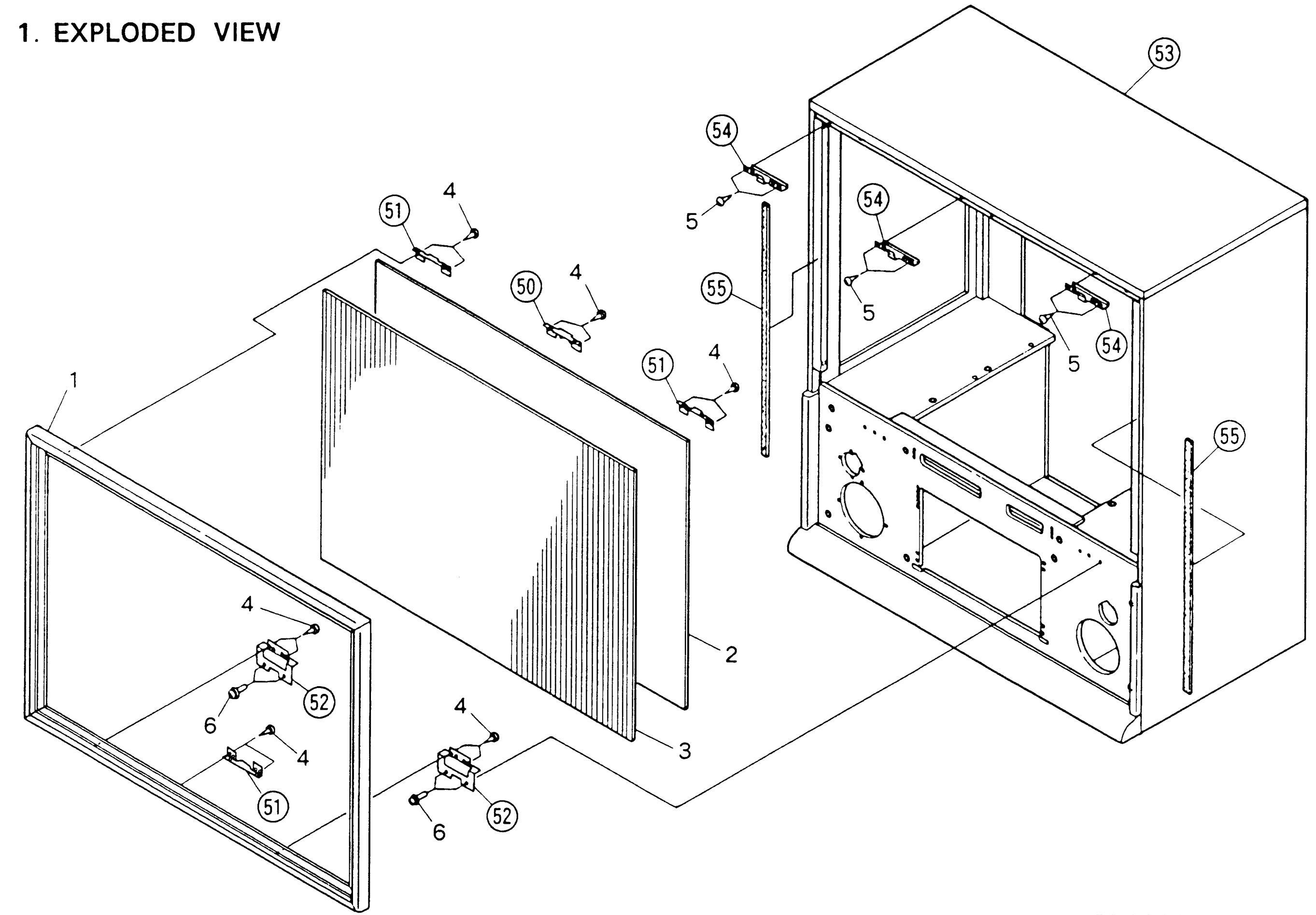
Mark	NO	Description	Part NO.
	VR501-503	VR(4.7K)	ACP1024
	VR504	VR(10K)	ACP1025
	VR505, 506	VR(47K)	ACP1027
	R1148	CARBON FILM RESISTOR	RD1/2PM100J
	R1195	METAL OXIDE RESISTOR	RS3LMF560J
	R1511	CARBONFILM RESISTOR	RD1/2PMFL3R9J
	R1523, 1526	METALFILM RESISTER	RN1/4PC4702F
	R1529	CARBONFILM RESISTOR	RD1/2PMFL680J
	R1530	CARBONFILM RESISTOR	RD1/4PM221J
	R1531	METALFILM RESISTER	RN1/4PC4302F
	R1541, 1542	METALFILM RESISTER	RN1/4PC ☐☐☐☐ F
	R1588	CARBONFILM RESISTOR	RD1/4PMFL8R2J
	R1610	METAL OXIDE RESISTOR	RS2LMF560J
	R1611	CARBON FILM RESISTOR	RD1/2PM391J
		Other resistors	RD1/8PM ☐☐☐ J

OTHERS

Mark	NO	Description	Part NO.
	X501	CRYSTAL OSCILLATOR(4.0MHz)	ASS-013
		PHONO JACK 9-P(VDP, VIDEO, REC)	AKB1133
		JACK(CONTROL)	AKN-207
		SOCKET(S-VIDEO)	AKP1064
		TV FRONT END	AXF1040

13.2 FOR SD-P504-K AND SD-P504-Q/KUX1C TYPES

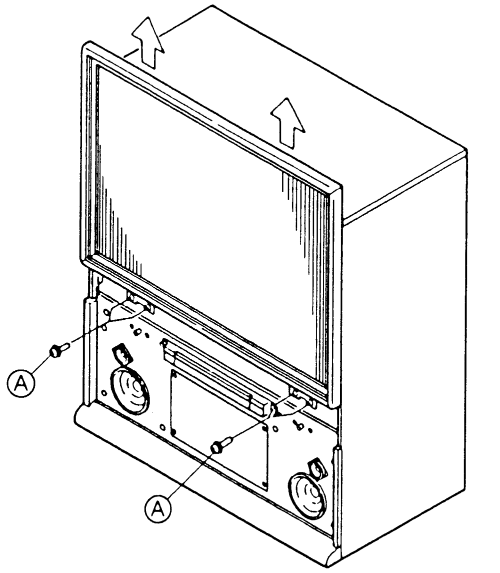
1. EXPLODED VIEW


53
54
54
54
55
55
51
51
51
50
52
52
1
2
3
4
4
4
4
4
4
5
5
5
6
6

Parts List

Mark	No.	Part No.	Description
	1	AAP1134	Screen frame assembly
	2	AMR2154	Fresnel lens
	3	AMR2157	Lenticular sheet
	4	BYC35P160FZK	Screw
	5	BYC35P120FZB	Screw
	6	ABA1067	Screw
	50		Frame upper holder A
	51		Frame upper holder B
	52		Frame under holder
	53		Cabinet
	54		Upper holder
	55		Cushion

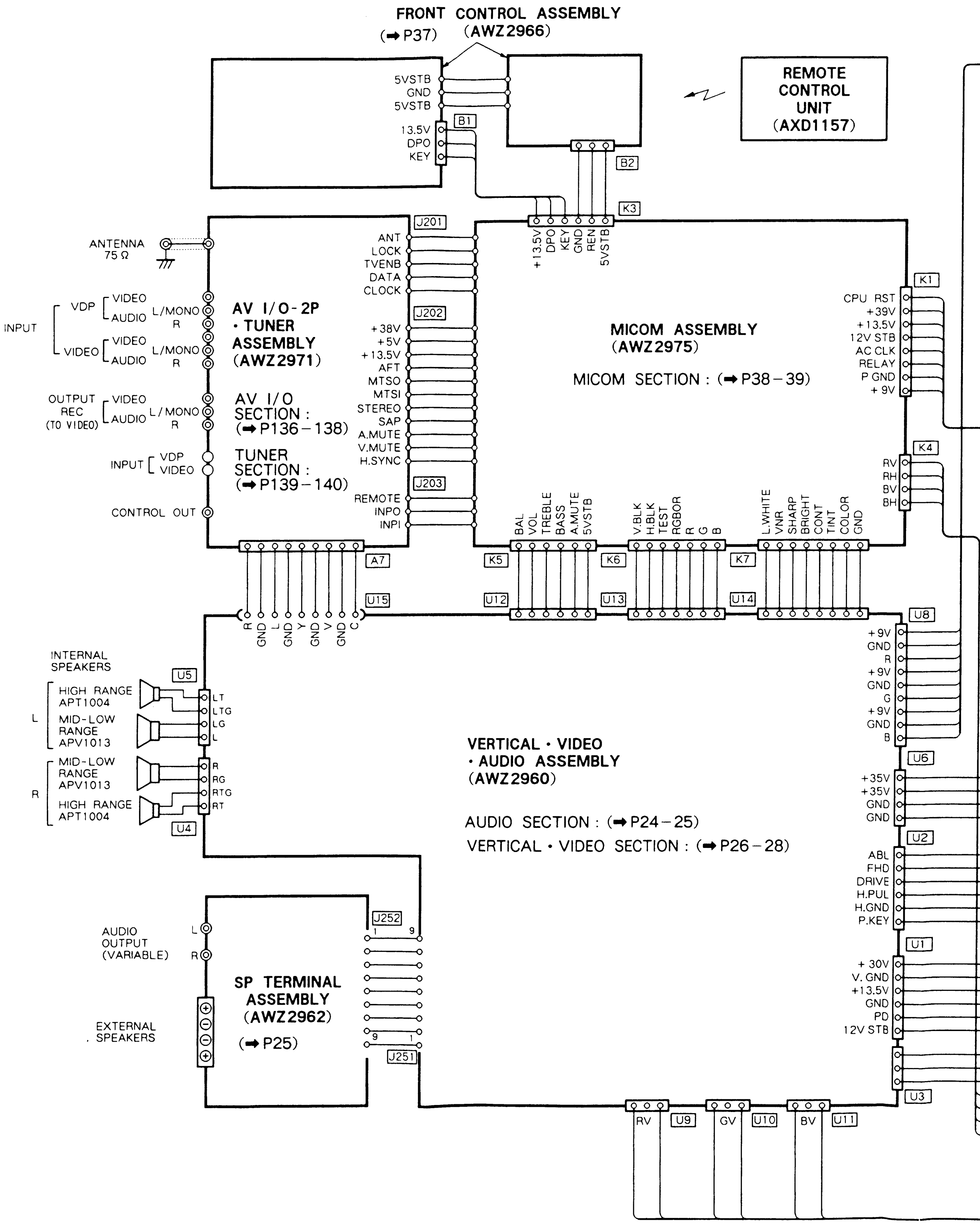
2. DISASSEMBLY OF SCREEN FRAME



① Remove a Grill F50 and a side panel assembly.
② Remove four screws Ⓐ.
③ Remove a Screen frame by pulling up in the direction of arrow.

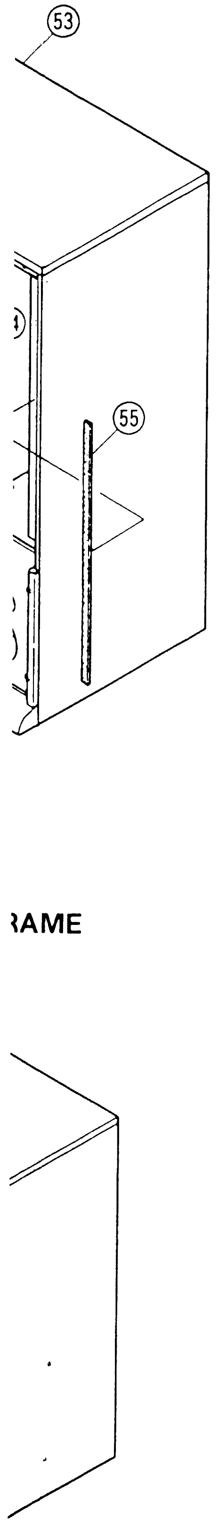
3. SCHEMATIC DIAGRAMS AND P. C. BOARD PATTERN

(1) OVERALL WIRING DIAGRAM FOR SD-P504-K AND SD-P504-Q/KUX1C TYPES


FRONT CONTROL ASSEMBLY
(➡P37) (AWZ2966)
5VSTB
GND
5VSTB
13.5V
DPO
KEY
B1
B2
K3
REMOTE CONTROL UNIT (AXD1157)
+13.5V
DPO
KEY
GND
REN
5VSTB
ANTENNA 75 Ω
INPUT
VDP VIDEO AUDIO L/MONO R
VIDEO VIDEO AUDIO L/MONO R
OUTPUT REC (TO VIDEO) VIDEO AUDIO L/MONO R
INPUT VDP VIDEO
CONTROL OUT
AV I/O-2P · TUNER ASSEMBLY (AWZ2971)
AV I/O SECTION : (➡P136-138)
TUNER SECTION : (➡P139-140)
J201
ANT
LOCK
TVENB
DATA
CLOCK
J202
+38V
+5V
+13.5V
AFT
MTSO
MTSI
STEREO
SAP
A.MUTE
V.MUTE
H.SYNC
J203
REMOTE
INPO
INPI
A7
MICOM ASSEMBLY (AWZ2975)
MICOM SECTION : (➡P38-39)
K1
CPU RST
+39V
+13.5V
12V STB
AC CLK
RELAY
P GND
+9V
K4
RV
RH
BV
BH
BAL
VOL
TREBLE
BASS
A.MUTE
5VSTB
V.BLK
H.BLK
TEST
RGBOR
R
G
B
L.WHITE
VNR
SHARP
BRIGHT
CONT
TINT
COLOR
GND
K5
K6
K7
U15
U12
U13
U14
R GND L GND Y GND V GND C
U8
+9V
GND
R
+9V
GND
G
+9V
GND
B
INTERNAL SPEAKERS
U5
L
HIGH RANGE APT1004
MID-LOW RANGE APV1013
LT
LTG
LG
L
R
MID-LOW RANGE APV1013
HIGH RANGE APT1004
R
RG
RTG
RT
U4
VERTICAL · VIDEO · AUDIO ASSEMBLY (AWZ2960)
AUDIO SECTION : (➡P24-25)
VERTICAL · VIDEO SECTION : (➡P26-28)
U6
+35V
+35V
GND
GND
U2
ABL
FHD
DRIVE
H.PUL
H.GND
P.KEY
U1
+30V
V. GND
+13.5V
GND
PD
12V STB
U3
AUDIO OUTPUT (VARIABLE)
L
R
EXTERNAL SPEAKERS
⊕
⊖
⊖
⊕
SP TERMINAL ASSEMBLY (AWZ2962)
(➡P25)
J252
1
9
9
1
J251
RV
U9
GV
U10
BV
U11

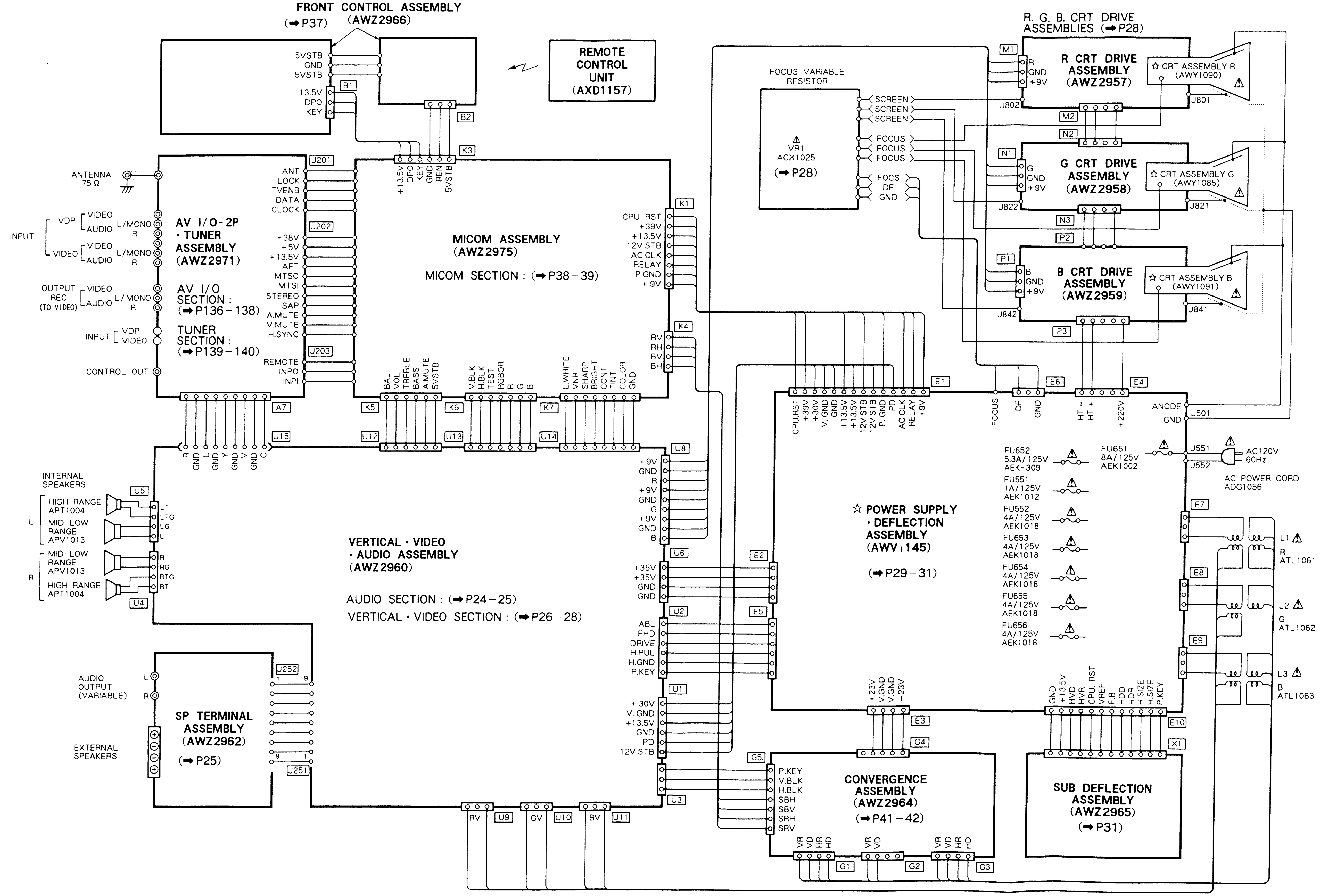
3. SCHEMATIC DIAGRAMS AND P.C. BOARD PATTERN

(1) OVERALL WIRING DIAGRAM FOR SD-P504-K AND SD-P504-Q/KUX1C TYPES



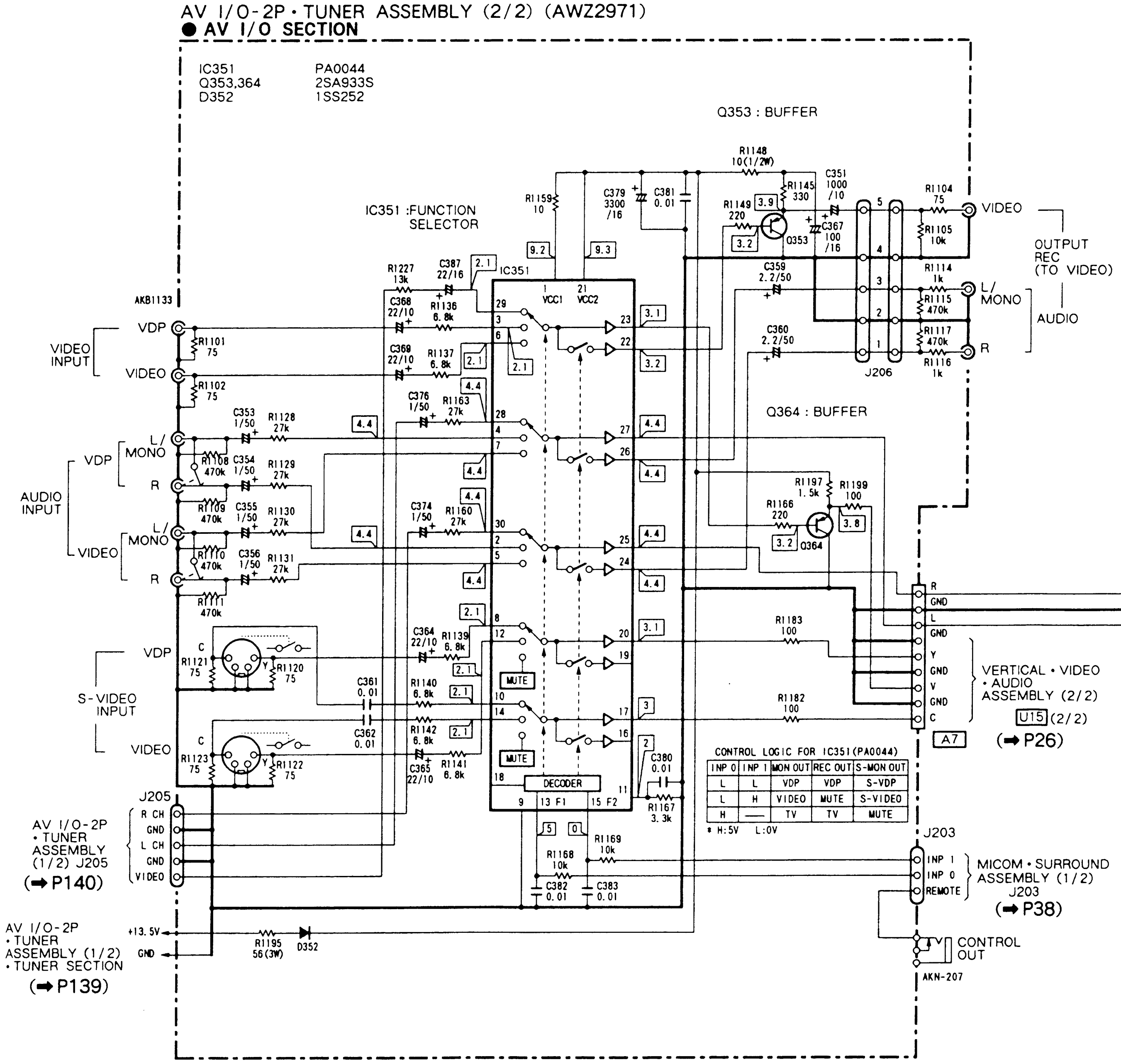
anel assembly.

p in the direction



FRONT CONTROL ASSEMBLY
(➡P37) (AWZ2966)
5VSTB
GND
5VSTB
13.5V
DPO
KEY
B1
B2
REMOTE CONTROL UNIT (AXD1157)
K3
+13.5V DPO KEY GND REN 5VSTB
ANTENNA 75 Ω
INPUT
VDP VIDEO AUDIO L/MONO R
VIDEO VIDEO AUDIO L/MONO R
OUTPUT REC (TO VIDEO) VIDEO AUDIO L/MONO R
INPUT VDP VIDEO
CONTROL OUT
AV I/O-2P
· TUNER
ASSEMBLY
(AWZ2971)
AV I/O SECTION : (➡P136 – 138)
TUNER SECTION : (➡P139 – 140)
J201 ANT LOCK TVENB DATA CLOCK
J202 +38V +5V +13.5V AFT MTSO MTSI STEREO SAP A.MUTE V.MUTE H.SYNC
J203 REMOTE INPO INPI
A7
MICOM ASSEMBLY
(AWZ2975)
MICOM SECTION : (➡P38 – 39)
K1 CPU RST +39V +13.5V 12V STB AC CLK RELAY P GND + 9V
K4 RV RH BV BH
K5 BAL VOL TREBLE BASS A.MUTE 5VSTB
K6 V.BLK H.BLK TEST RGBOR R G B
K7 L.WHITE VNR SHARP BRIGHT CONT TINT COLOR GND
U15 R GND L GND Y GND V GND C
U12 U13 U14
INTERNAL SPEAKERS
L HIGH RANGE APT1004
MID-LOW RANGE APV1013
R MID-LOW RANGE APV1013
HIGH RANGE APT1004
U5 LT LTG LG L
U4 R RG RTG RT
VERTICAL · VIDEO
· AUDIO ASSEMBLY
(AWZ2960)
AUDIO SECTION : (➡P24 – 25)
VERTICAL · VIDEO SECTION : (➡P26 – 28)
U8 +9V GND R +9V GND G +9V GND B
U6 +35V +35V GND GND
U2 ABL FHD DRIVE H.PUL H.GND P.KEY
U1 + 30V V. GND +13.5V GND PD 12V STB
U3
RV U9 GV U10 BV U11
AUDIO OUTPUT (VARIABLE) L R
EXTERNAL SPEAKERS
SP TERMINAL ASSEMBLY (AWZ2962) (➡P25)
J252 1 9
J251 9 1
FOCUS VARIABLE RESISTOR
VR1 ACX1025 (➡P28)
SCREEN SCREEN SCREEN
FOCUS FOCUS FOCUS
FOCS DF GND
R. G. B. CRT DRIVE ASSEMBLIES (➡P28)
M1 R GND +9V
R CRT DRIVE ASSEMBLY (AWZ2957)
☆ CRT ASSEMBLY R (AWY1090)
J802 J801 M2 N2
N1 G GND +9V
G CRT DRIVE ASSEMBLY (AWZ2958)
☆ CRT ASSEMBLY G (AWY1085)
J822 J821 N3 P2
P1 B GND +9V
B CRT DRIVE ASSEMBLY (AWZ2959)
☆ CRT ASSEMBLY B (AWY1091)
J842 J841 P3
E1 CPU.RST +39V +30V V. GND GND +13.5V +13.5V 12V STB 12V STB P. GND PD AC CLK RELAY +9V
E6 FOCUS DF GND
E4 HT – HT + +220V
ANODE GND J501
FU652 6.3A/125V AEK-309
FU651 8A/125V AEK1002
J551 J552 AC120V 60Hz
AC POWER CORD ADG1056
FU551 1A/125V AEK1012
FU552 4A/125V AEK1018
FU653 4A/125V AEK1018
FU654 4A/125V AEK1018
FU655 4A/125V AEK1018
FU656 4A/125V AEK1018
☆ POWER SUPPLY
· DEFLECTION
ASSEMBLY
(AWV1145)
(➡P29 – 31)
E2 E5
E7 L1 R ATL1061
E8 L2 G ATL1062
E9 L3 B ATL1063
E3 +23V V.GND V.GND –23V
E10 GND +13.5V HVD HVR CPU. RST VREF F.B HDD HDR H.SIZE H.SIZE P.KEY
G4 X1
G5 P.KEY V.BLK H.BLK SBH SBV SRH SRV
CONVERGENCE ASSEMBLY (AWZ2964) (➡P41 – 42)
VR VD HR HD G1 VR VD G2 VR VD HR HD G3
SUB DEFLECTION ASSEMBLY (AWZ2965) (➡P31)
A B C D

(2) AV I/O-2P • TUNER ASSEMBLY (2/2 : AV I/O SECTION), VERTICAL • VIDEO • AUDIO ASSEMBLY (1/2 : AUDIO SECTION) AND SP TERMINAL ASSEMBLY

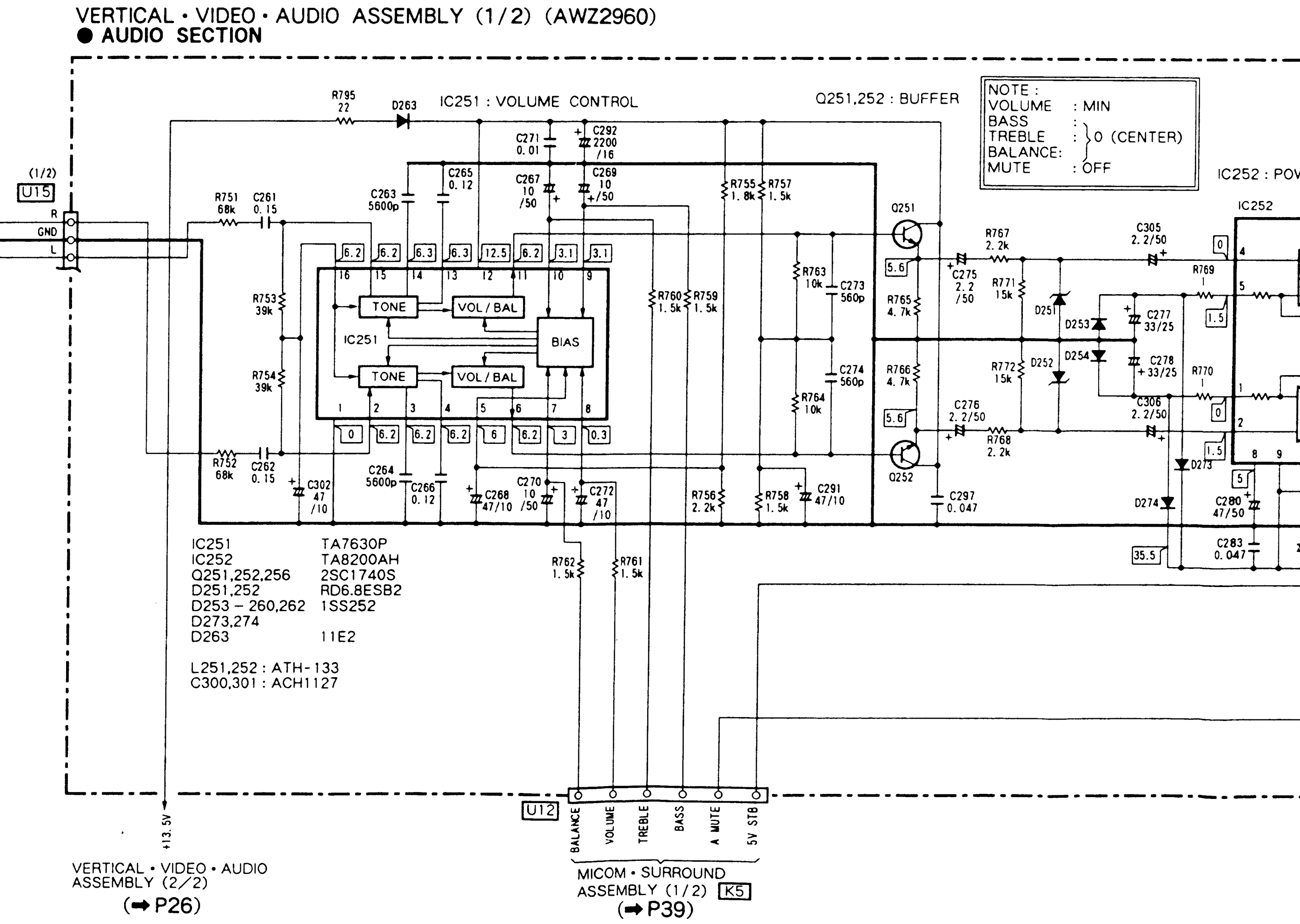

AV I/O-2P • TUNER ASSEMBLY (2/2) (AWZ2971)
● AV I/O SECTION
IC351 PA0044
Q353,364 2SA933S
D352 1SS252
Q353 : BUFFER
IC351 :FUNCTION SELECTOR
Q364 : BUFFER
AKB1133
VIDEO INPUT
VDP
VIDEO
AUDIO INPUT
L/MONO
R
S-VIDEO INPUT
J205
AV I/O-2P • TUNER ASSEMBLY (1/2) J205
(➡P140)
R CH
GND
L CH
GND
VIDEO
AV I/O-2P • TUNER ASSEMBLY (1/2) • TUNER SECTION
(➡P139)
+13.5V
GND
R1195 56(3W)
D352
J206
OUTPUT REC (TO VIDEO)
AUDIO
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
U15 (2/2)
(➡P26)
A7
J203
INP 1
INP 0
REMOTE
MICOM • SURROUND ASSEMBLY (1/2) J203
(➡P38)
CONTROL OUT
AKN-207
DECODER
MUTE

CONTROL LOGIC FOR IC351(PA0044)

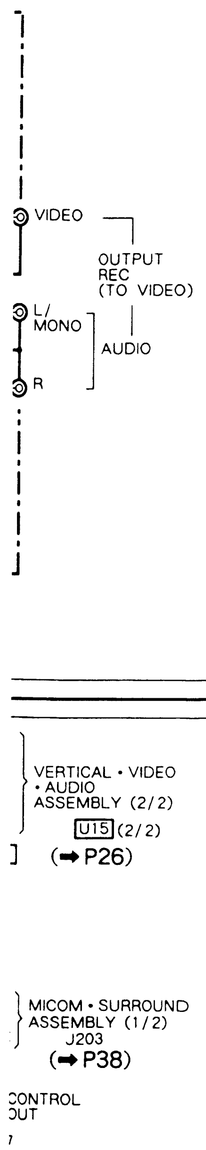
INP 0	INP 1	MON OUT	REC OUT	S-MON OUT
L	L	VDP	VDP	S-VDP
L	H	VIDEO	MUTE	S-VIDEO
H	—	TV	TV	MUTE

* H:5V L:0V

Note :As to the other schematic diagrams and P. C. boards pattern, refer to the section "7. SCHEMATIC DIAGRAM AND P. C. BOARDS PATTERN " (pages 21 – 68.)

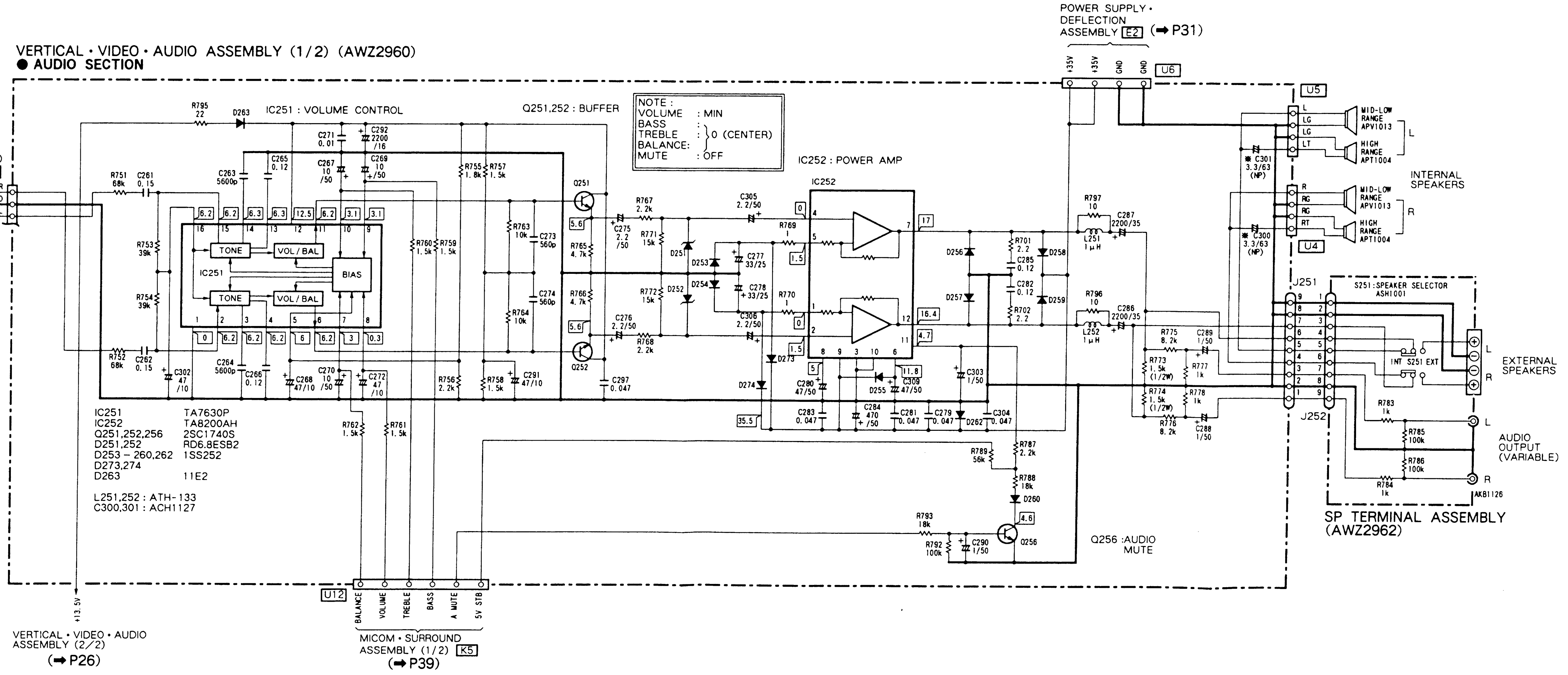

VERTICAL • VIDEO • AUDIO ASSEMBLY (1/2) (AWZ2960)
● AUDIO SECTION
IC251 : VOLUME CONTROL
Q251,252 : BUFFER
IC252 : POW
NOTE :
VOLUME : MIN
BASS :
TREBLE : 0 (CENTER)
BALANCE:
MUTE : OFF
(1/2) U15
R
GND
L
TONE
VOL/BAL
BIAS
IC251
IC251 TA7630P
IC252 TA8200AH
Q251,252,256 2SC1740S
D251,252 RD6.8ESB2
D253 – 260,262 1SS252
D273,274
D263 11E2
L251,252 : ATH-133
C300,301 : ACH1127
+13.5V
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
(➡P26)
U12
BALANCE
VOLUME
TREBLE
BASS
A MUTE
5V STB
MICOM • SURROUND ASSEMBLY (1/2) K5
(➡P39)

Note :As to the other schematic diagrams and P. C. boards pattern, refer to the section "7. SCHEMATIC DIAGRAM AND P. C. BOARDS PATTERN " (pages 21 – 68.)


VIDEO
OUTPUT
REC
(TO VIDEO)
L/
MONO
AUDIO
R
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
U15 (2/2)
(➡P26)
MICOM • SURROUND ASSEMBLY (1/2)
J203
(➡P38)
CONTROL
OUT

VERTICAL • VIDEO • AUDIO ASSEMBLY (1/2) (AWZ2960)

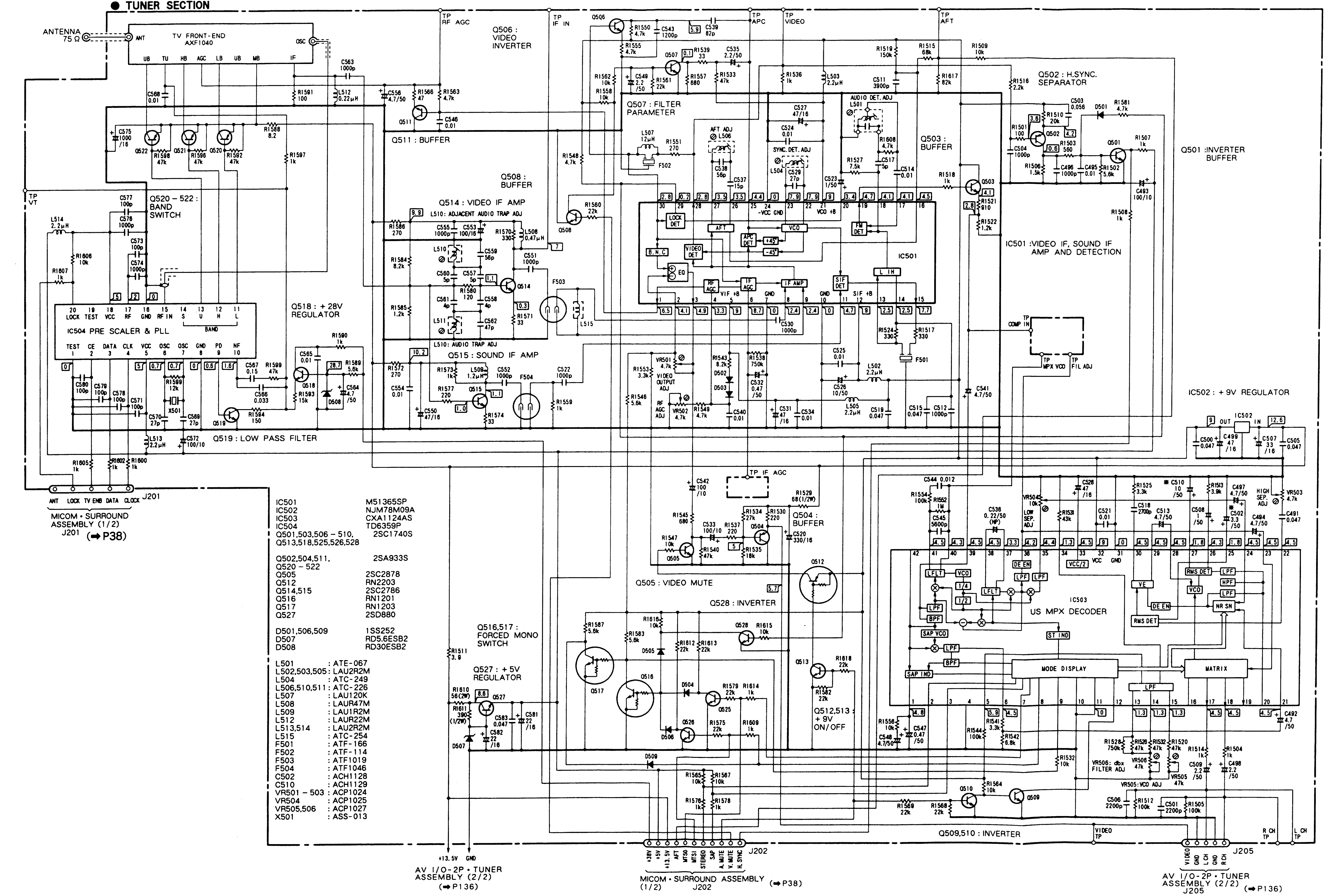
● AUDIO SECTION


POWER SUPPLY • DEFLECTION ASSEMBLY E2 (➡P31)
+35V
+35V
GND
GND
U6
U5
IC251 : VOLUME CONTROL
Q251,252 : BUFFER
NOTE :
VOLUME : MIN
BASS :
TREBLE : } 0 (CENTER)
BALANCE:
MUTE : OFF
IC252 : POWER AMP
IC252
TONE
VOL / BAL
BIAS
IC251
(1/2)
U15
R
GND
L
R795 22
D263
C271 0.01
C292 2200 /16
C265 0.12
C263 5600p
C267 10 /50
C269 10 /50
R755 1.8k
R757 1.5k
R751 68k
C261 0.15
R753 39k
R754 39k
R752 68k
C262 0.15
C302 47 /10
C264 5600p
C266 0.12
C268 47/10
C270 10 /50
C272 47 /10
R760 1.5k
R759 1.5k
R763 10k
C273 560p
C274 560p
R764 10k
R756 2.2k
R758 1.5k
C291 47/10
Q251
Q252
R765 4.7k
R766 4.7k
C297 0.047
R767 2.2k
C275 2.2 /50
R771 15k
R772 15k
C276 2.2/50
R768 2.2k
C305 2.2/50
D251
D252
D253
D254
C277 33/25
C278 +33/25
C306 2.2/50
R769 1
R770 1
D273
D274
C280 47/50
C283 0.047
C284 470 /50
D255
C309 47/50
C281 0.047
C279 0.047
D262
C304 0.047
C303 1/50
D256
D257
R701 2.2
C285 0.12
C282 0.12
R702 2.2
D258
D259
R797 10
L251 1μH
C287 2200/35
R796 10
L252 1μH
C286 2200/35
R775 8.2k
C289 1/50
R773 1.5k (1/2W)
R777 1k
R774 1.5k (1/2W)
R778 1k
R776 8.2k
C288 1/50
R787 2.2k
R789 56k
R788 18k
D260
R793 18k
R792 100k
C290 1/50
Q256
Q256 :AUDIO MUTE
R762 1.5k
R761 1.5k
6.2 6.2 6.3 6.3 12.5 6.2 3.1 3.1
0 6.2 6.2 6.2 0 6.2 0 0.3
5.6
5.6
0
1.5
0
1.5
17
16.4
4.7
11.8
5
35.5
4.6
IC251 TA7630P
IC252 TA8200AH
Q251,252,256 2SC1740S
D251,252 RD6.8ESB2
D253 – 260,262 1SS252
D273,274
D263 11E2
L251,252 : ATH-133
C300,301 : ACH1127
U12
BALANCE
VOLUME
TREBLE
BASS
A MUTE
5V STB
+13.5V
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2)
(➡P26)
MICOM • SURROUND ASSEMBLY (1/2) K5
(➡P39)
✱ C301 3.3/63 (NP)
✱ C300 3.3/63 (NP)
U4
L
LG
LG
LT
R
RG
RG
RT
MID-LOW RANGE APV1013
HIGH RANGE APT1004
MID-LOW RANGE APV1013
HIGH RANGE APT1004
L
R
INTERNAL SPEAKERS
J251
J252
S251:SPEAKER SELECTOR ASH1001
INT S251 EXT
EXTERNAL SPEAKERS
L
R
R783 1k
R785 100k
R786 100k
R784 1k
AUDIO OUTPUT (VARIABLE)
AKB1126
SP TERMINAL ASSEMBLY (AWZ2962)

(3) AV I/O-2P • TUNER ASSEMBLY (1/2 : TUNER SECTION)

AV I/O-2P • TUNER ASSEMBLY (1/2) (AWZ2971 : SD-P504-K AND SD-P504-Q)

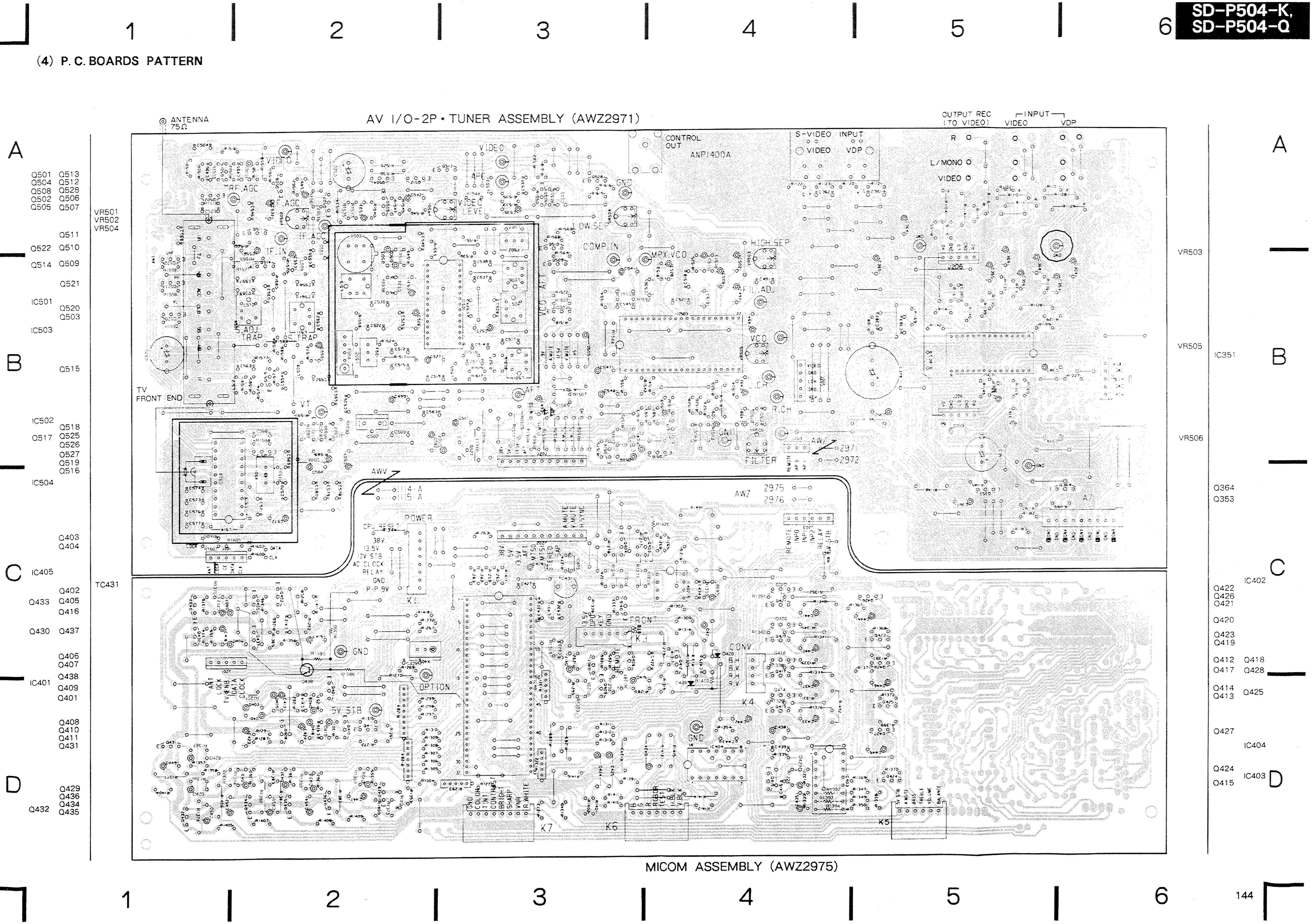
● TUNER SECTION


ANTENNA 75 Ω
TV FRONT-END AXF1040
IC504 PRE SCALER & PLL
Q520 – 522 : BAND SWITCH
Q518 : +28V REGULATOR
Q519 : LOW PASS FILTER
Q511 : BUFFER
Q506 : VIDEO INVERTER
Q507 : FILTER PARAMETER
Q508 : BUFFER
Q514 : VIDEO IF AMP
L510 : ADJUCENT AUDIO TRAP ADJ
Q515 : SOUND IF AMP
L510 : AUDIO TRAP ADJ
Q503 : BUFFER
Q502 : H.SYNC. SEPARATOR
Q501 : INVERTER BUFFER
IC501 : VIDEO IF, SOUND IF AMP AND DETECTION
IC502 : +9V REGULATOR
IC503 US MPX DECODER
Q504 : BUFFER
Q505 : VIDEO MUTE
Q528 : INVERTER
Q516,517 : FORCED MONO SWITCH
Q527 : +5V REGULATOR
Q512,513 : +9V ON/OFF
Q509,510 : INVERTER
TP RF AGC
TP IF IN
TP APC
TP VIDEO
TP AFT
TP VT
TP IF AGC
VIDEO OUTPUT ADJ
RF AGC ADJ
AFT ADJ
SYNC. DET. ADJ
AUDIO DET. ADJ
VR506 : dbx FILTER ADJ
VR505 : VCO ADJ
MODE DISPLAY
MATRIX
J201
MICOM • SURROUND ASSEMBLY (1/2) J201 (➡P38)
J202
MICOM • SURROUND ASSEMBLY (1/2) J202 (➡P38)
+13.5V GND
AV I/O-2P • TUNER ASSEMBLY (2/2) (➡P136)
J205
AV I/O-2P • TUNER ASSEMBLY (2/2) J205 (➡P136)

IC501	M51365SP
IC502	NJM78M09A
IC503	CXA1124AS
IC504	TD6359P
Q501,503,506 – 510, Q513,518,525,526,528	2SC1740S
Q502,504,511, Q520 – 522	2SA933S
Q505	2SC2878
Q512	RN2203
Q514,515	2SC2786
Q516	RN1201
Q517	RN1203
Q527	2SD880
D501,506,509	1SS252
D507	RD5.6ESB2
D508	RD30ESB2

L501 : ATE-067
L502,503,505 : LAU2R2M
L504 : ATC-249
L506,510,511 : ATC-226
L507 : LAU120K
L508 : LAUR47M
L509 : LAU1R2M
L512 : LAUR22M
L513,514 : LAU2R2M
L515 : ATC-254
F501 : ATF-166
F502 : ATF-114
F503 : ATF1019
F504 : ATF1046
C502 : ACH1128
C510 : ACH1129
VR501 – 503 : ACP1024
VR504 : ACP1025
VR505,506 : ACP1027
X501 : ASS-013

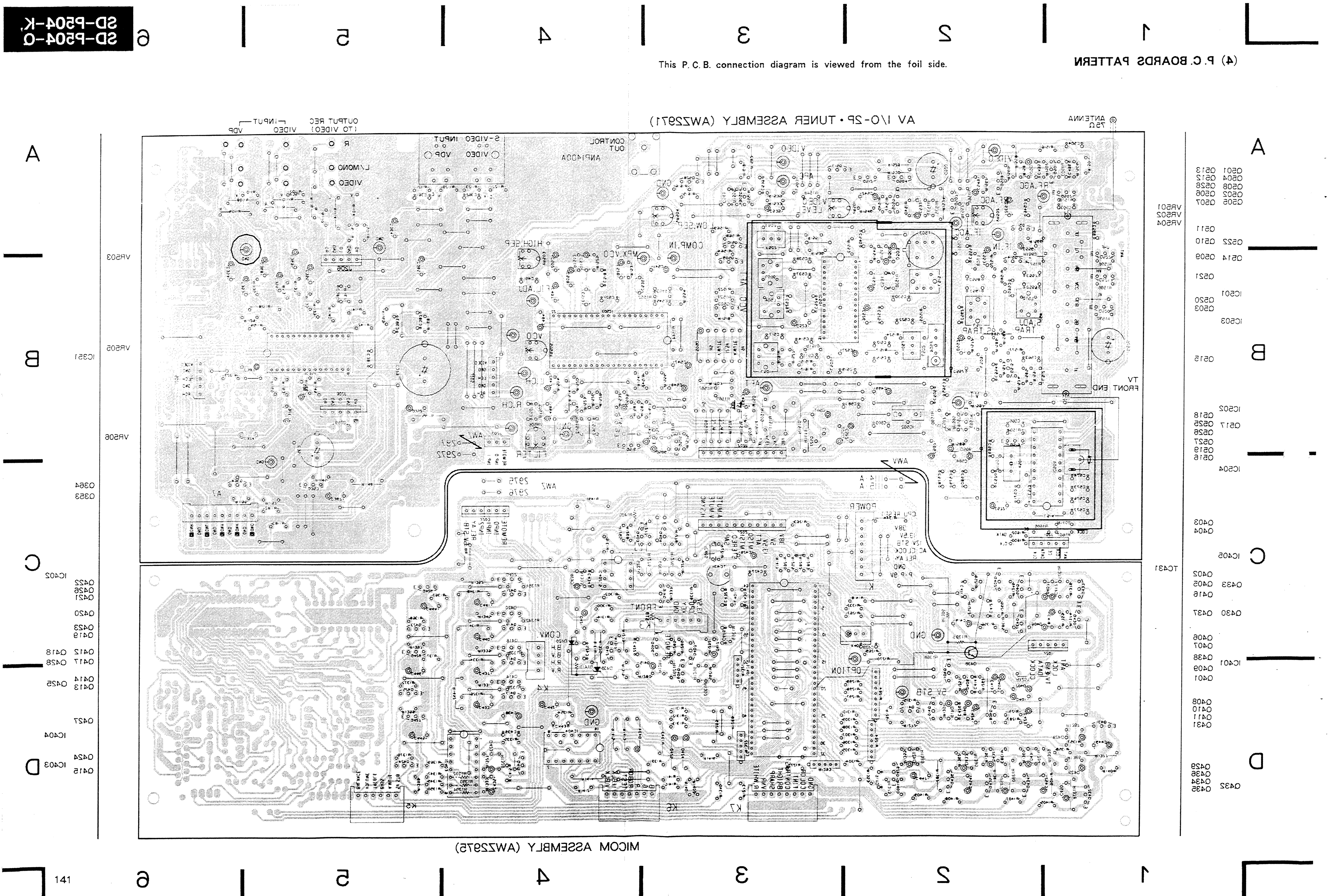
(4) P. C. BOARDS PATTERN


AV I/O-2P • TUNER ASSEMBLY (AWZ2971)

MICOM ASSEMBLY (AWZ2975)
1
2
3
4
5
6
A
B
C
D
ANTENNA 75Ω
TV FRONT END
CONTROL OUT
ANP1400A
S-VIDEO INPUT
VIDEO
VDP
OUTPUT REC (TO VIDEO)
INPUT
VIDEO
VDP
R
L/MONO
VIDEO
RF.AGC
AGC
IF.AGC
IF.IN
S.ADJ
TRAP
S.TRAP
VIDEO
AFC
VIDEO LEVEL
LOW.SEP
COMP.IN
MPX.VCO
HIGH.SEP
FIL.ADJ
VCO
L.CH
R.CH
AFT
VT
GND
FILTER
AWZ 2971
2972
AWV
114-A
115-A
AWZ 2975
2976
POWER
CPU RESET
38V
13.5V
12V STB
AC CLOCK
RELAY
GND
P-P 9V
K1
FRONT
K3
CONV.
K4
GND
OPTION
5V STB
K7
K6
K5
GND
COLOR
TINT
CONTRAST
BRIGHT
SHARP
R.WHITE
A.MUTE
V.MUTE
H.SYNC
REMOTE
RELAY
Q501 Q513
Q504 Q512
Q508 Q528
Q502 Q506
Q505 Q507
VR501
VR502
VR504
Q511
Q522 Q510
Q514 Q509
Q521
IC501
Q520
Q503
IC503
Q515
IC502
Q518
Q517 Q525
Q526
Q527
Q519
Q516
IC504
Q403
Q404
IC405
TC431
Q402
Q433 Q405
Q416
Q430 Q437
Q406
Q407
Q438
IC401 Q409
Q401
Q408
Q410
Q411
Q431
Q429
Q436
Q432 Q434
Q435
VR503
VR505
IC351
VR506
Q364
Q353
IC402
Q422
Q426
Q421
Q420
Q423
Q419
Q412 Q418
Q417 Q428
Q414
Q413 Q425
Q427
IC404
Q424
Q415 IC403

(4) P.C. BOARDS PATTERN

This P. C. B. connection diagram is viewed from the foil side.


6
5
4
3
2
1
A
B
C
D
AV I/O-2P•TUNER ASSEMBLY (AWZ2971)
MICOM ASSEMBLY (AWZ2975)
ANTENNA 75Ω
TV FRONT END
INPUT
VDP
VIDEO
OUTPUT REC (TO VIDEO)
R
L/MONO
VIDEO
S-VIDEO INPUT
VIDEO
VDP
CONTROL OUT
ANP1400A
VIDEO
APC
VIDEO LEVEL
RF.AGC
IF.AGC
LOW.SEP
COMP.IN
MPX.VCO
HIGH.SEP
FIL.ADJ
VCO
L.CH
R.CH
FILTER
SIF.IN
4.5TRAP
LOAD TRAP
AFT
VT
AWZ 2971
AWZ 2972
AWZ 2975
AWZ 2976
AWV
POWER
CPU RESET
38V
13.5V
12V STB
AC CLOCK
RELAY
GND
P-9V
CONV
FRONT
GND
OPTION
5V STB
GND
K4
K5
K6
K7
CLOCK
TRA
VR501
VR502
VR504
VR503
VR505
VR506
IC351
Q364
Q353
IC402
Q422
Q426
Q421
Q420
Q423
Q419
Q418
Q428
Q412
Q417
Q414
Q413
Q425
Q427
IC404
Q424
IC403
Q415
Q501
Q504
Q508
Q502
Q505
Q513
Q512
Q528
Q506
Q507
Q511
Q510
Q509
Q522
Q514
Q521
IC501
Q520
Q503
IC503
Q515
IC502
Q518
Q525
Q526
Q527
Q519
Q516
Q517
IC504
Q403
Q404
IC405
IC431
Q402
Q405
Q416
Q433
Q437
Q430
Q406
Q407
Q438
Q409
Q401
IC401
Q408
Q410
Q411
Q431
Q429
Q436
Q434
Q435
Q432

PIONEER
The future of sound and vision.

Service Manual

ORDER NO.
ARP2085

PROJECTION MONITOR RECEIVER

SD-P5004S

- Refer to the service manual ARP2082, SD-P5047-Q and SD-P504-K.

- This manual is applicable to the SD-P5004/S type.

MC-Service

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IFO JULY.1990 Printed in Japan

1. CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

■ Charged section

The circuit in which the commercial AC power is used as it is without passing through the power supply transformer. If the charged section is touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. In this case, be sure to connect the set via an insulated transformer and supply the current.

■ Charged section (Power supply primary side)

1.	The primary side of the POWER SUPPLY • DEFLECTION assembly	AWV1148
2.	AC power cord	ADG1056
3.	LINE FILTER assembly	AWT1006
4.	Voltage selector (S1)	AKX-502
5.	Power transformer (T1)	ATS1166

part is the charged section.

part is the high voltage generating points other than the charged section.

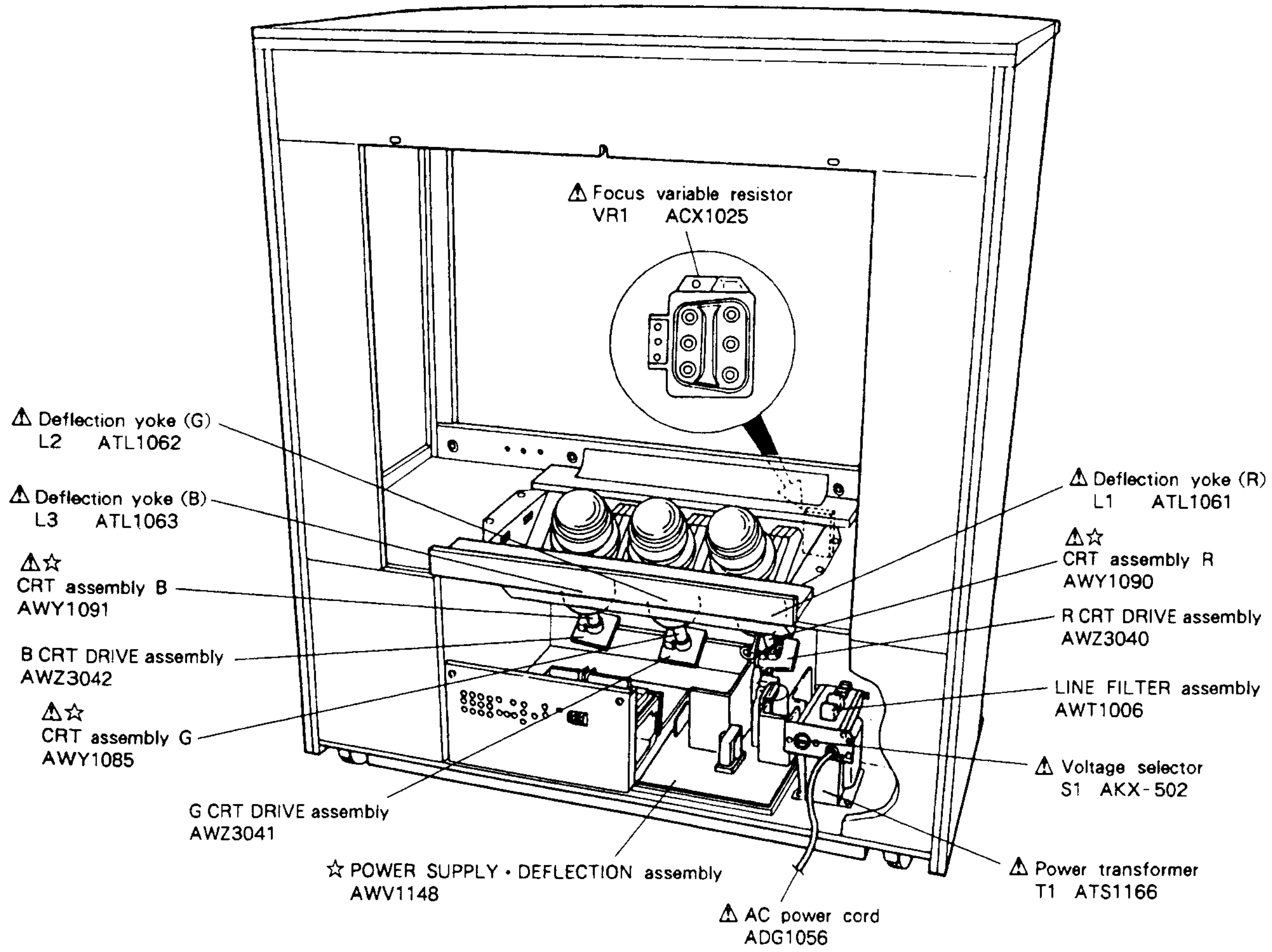
⚠ Focus variable resistor
VR1 ACX1025
⚠ Deflection yoke (G)
L2 ATL1062
⚠ Deflection yoke (B)
L3 ATL1063
⚠☆
CRT assembly B
AWY1091
B CRT DRIVE assembly
AWZ3042
⚠☆
CRT assembly G
AWY1085
G CRT DRIVE assembly
AWZ3041
☆ POWER SUPPLY • DEFLECTION assembly
AWV1148
⚠ AC power cord
ADG1056
⚠ Deflection yoke (R)
L1 ATL1061
⚠☆
CRT assembly R
AWY1090
R CRT DRIVE assembly
AWZ3040
LINE FILTER assembly
AWT1006
⚠ Voltage selector
S1 AKX-502
⚠ Power transformer
T1 ATS1166

Fig. 1-1 Charged section and high voltage generating point

2. CONTRAST OF MISCELLANEOUS PARTS

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
560 Ω → 56 × 10^1 → 561 ········· RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
47k Ω → 47 × 10^3 → 473 ········· RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5 Ω → 0R5 ········· RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1 Ω → 010 ········· RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10^1 → 5621 ········· RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

- Parts marked by ☆ are important parts which use X – rays.
  If any of these parts need to be replaced, always replace with specified parts.

The SD-P5004/S type is the same as the SD-P5047-Q/KUX1C type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		SD-P5047-Q /KUX1C type	SD-P5004 /S type	
	Door assembly	AAN1214	AAN1234	
	Louver	AAP1116	• • • • •	
	Screen frame H	AAP1118	• • • • •	
	Screen frame V	AAP1119	• • • • •	
	Screen frame assembly	• • • • •	AAP1134	
	Cabinet	Non supply	Non supply	
⚠	Fuse (8A, FU651)	AEK1002	• • • • •	
⚠	Fuse (8A, FU659)	• • • • •	AEK1002	
	Screw	ABA1011	• • • • •	
	Screw	ABA1080	BYC40P250FMC	For shield plate
	PWB screw	• • • • •	ABA1085	
	Screw	ABA1108	• • • • •	
	Screw	ABA1110	• • • • •	
	Spacer	Non supply	• • • • •	For fresnel lens
	Cushion	AHA1194	• • • • •	For packing
	Upper pad L	AHA1342	AHA1353	For packing
	Upper pad R	AHA1343	AHA1354	For packing
	Under pad L	AHA1344	AHA1355	For packing
	Under pad R	AHA1345	AHA1356	For packing
	Cushion	AHA1358	• • • • •	For packing
	Under carton	AHD1872	AHD1892	For packing
	Upper carton	AHD1882	AHD1932	For packing
	Tube	• • • • •	AHD1935	For packing
⚠	S1 Voltage selector (AC110V, 120V, 220V, 240V)	• • • • •	AKX-502	
	Side panel assembly	AMB1677	AMB1497	
	Front panel assembly	AMB1675	AMB1676	
	Door L	AMM1177	• • • • •	
	Door R	AMM1178	• • • • •	
	Louver spacer	Non supply	• • • • •	
	Grill F50	• • • • •	AMM1382	
	Caster	AMR1652	AMR1117	
	Grill R50	AMR2150	• • • • •	
	Mirror	AMR2173	AMR2176	
	Holder assembly	Non supply	• • • • •	

Mark	Symbol & Description	Part		Remarks
		SD-P5047-Q /KUX1C type	SD-P5004 /S type	
	Holder assembly	Non supply	• • • • •	
	SW holder	• • • • •	Non supply	
	Frame upper holder A	• • • • •	Non supply	
	Frame upper holder B	• • • • •	Non supply	
	Frame under holder	• • • • •	Non supply	
	Cabinet upper holder	• • • • •	Non supply	
	Hinge A	ANG1462	• • • • •	
	Hinge B	ANG1463	• • • • •	
	Guide pin	Non supply	• • • • •	
	Operating instruction (English)	ARB1254	ARB1274	
⚠	T1 Power transformer (AC110V, 120V, 220V, 240V)	• • • • •	ATS1166	
	Remote control unit (CU-SD030)	AXD1155	• • • • •	
	Remote control unit (CU-SD033)	• • • • •	AXD1156	
	Battery cover	AZA1138	PZN1001	
	Screw	• • • • •	BYC40P160FMC	For power transformer
	Screw	BYC40P200FMC	• • • • •	
	Screw	BYC40P220FZK	• • • • •	
	Screw	PMB40P200FMC	• • • • •	
	Washer	WA42F120K080	• • • • •	
	LINE FILTER assembly	• • • • •	AWT1006	
	R.CRT DRIVE assembly	AWZ2957	AWZ3040	
	G.CRT DRIVE assembly	AWZ2958	AWZ3041	
	B.CRT DRIVE assembly	AWZ2959	AWZ3042	
	VERTICAL • VIDEO • AUDIO assembly	AWZ2961	AWZ3051	
	CONVERGENCE assembly	AWZ2964	AWZ3166	
	FRONT CONTROL assembly	AWZ2967	AWZ2966	
	FRONT INPUT TERMINAL assembly	AWZ2969	• • • • •	
	AV I/O-3P • TUNER assembly	AWZ2973	• • • • •	
	AV I/O-2P • TUNER assembly	• • • • •	AWZ2972	
	MICOM • SURROUND assembly	AWZ2977	AWZ3129	
☆	POWER SUPPLY • DEFLECTION assembly	AWV1146	AWV1148	

POWER SUPPLY • DEFLECTION assembly (AWV1148)

The POWER SUPPLY • DEFLECTION assembly (AWV1148) is the same as the POWER SUPPLY • DEFLECTION assembly (AWV1146) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWV1146	AWV1148	
	C701,C702 (0.1μ/AC250V)	ACE-507	• • • • •	
	L651 Line filter	ATF1031	• • • • •	
	R252 Solid (2.2M, 1/2W)	ACN-208	• • • • •	

FRONT CONTROL Assembly (AWZ2966)

The FRONT CONTROL assembly (AWZ2966) is the same as the FRONT CONTROL assembly (AWZ2967) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2967	AWZ2966	
	S866 Tact switch (ANTENNA)	ASG1034	• • • • •	

Note: Schematic diagram and P.C. board pattern of the FRONT CONTROL assembly is the same as the SD-P504-K/KUX1C type.
Refer to the schematic diagram and P.C. board pattern of the SD-P504-K/KUX1C type.

MICOM • SURROUND assembly (AWZ3129)

The MICOM•SURROUND assembly (AWZ3129) is the same as the MICOM•SURROUND assembly (AWZ2977) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2977	AWZ3129	
	● MICOM section			
	R1269	RD1/8PM752J	RD1/8PM392J	
	R1270	RD1/8PM682J	RD1/8PM103J	

Note: Schematic diagram of the MICOM•SURROUND assembly is the same as the SD-P5047-Q/KUX1C type except values of R1269 and R1270.
Refer to the schematic diagram of the SD-P5047-Q/KUX1C type.

CONVERGENCE Assembly (AWZ3166)

The CONVERGENCE assembly (AWZ3166) is the same as the CONVERGENCE assembly (AWZ2964) for the service supply parts.

R. CRT DRIVE Assembly (AWZ3040)

The R. CRT DRIVE assembly (AWZ3040) is the same as the R. CRT DRIVE assembly (AWZ2957) for the service supply parts.

G. CRT DRIVE Assembly (AWZ3041)

The G. CRT DRIVE assembly (AWZ3041) is the same as the G. CRT DRIVE assembly (AWZ2958) for the service supply parts.

B. CRT DRIVE Assembly (AWZ3042)

The B. CRT DRIVE assembly (AWZ3042) is the same as the B. CRT DRIVE assembly (AWZ2959) for the service supply parts.

VERTICAL • VIDEO • AUDIO Assembly (AWZ3051)

The VERTICAL • VIDEO • AUDIO Assembly (AWZ3051) is the same as the VERTICAL • VIDEO • AUDIO assembly (AWZ2961) for the service supply parts.

MC-Service

3. P.C.B's PARTS LIST

LINE FILTER Assembly (AWT1006)

COILS

Mark	No.	Description	Part No.
	L699, L700	Line filter	ATF1031

CAPACITORS

Mark	No.	Description	Part No.
	C788-C790	(0.1μ/AC250V)	ACE-507

RESISTOR

Mark	No.	Description	Part No.
	R350	Solid(2.2M, 1/2W)	ACN-208

AV I/O-2P・TUNER Assembly (AWZ2972)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC351	AV SELECTOR IC	PA0044
	IC501		M51365SP
	IC502		NJM78M09A
	IC503	US MPX DECODER IC	CXA1124AS
	IC504		TD6359P
	Q353, 355	TRANSISTOR	2SA933S
	Q356	TRANSISTOR	2SC1740S
	Q357	TRANSISTOR	2SA933S
	Q358	TRANSISTOR	2SC1740S
	Q364	TRANSISTOR	2SA933S
	Q371	TRANSISTOR	2SC1740S
	Q372	TRANSISTOR	2SA933S
	Q373, 501	TRANSISTOR	2SC1740S
	Q502	TRANSISTOR	2SA933S
	Q503	TRANSISTOR	2SC1740S
	Q504	TRANSISTOR	2SA933S
	Q505	TRANSISTOR	2SC2878
	Q506-510	TRANSISTOR	2SC1740S
	Q511	TRANSISTOR	2SA933S
	Q512	TRANSISTOR	RN2203
	Q513	TRANSISTOR	2SC1740S
	Q514, 515	TRANSISTOR	2SC2786
	Q516	TRANSISTOR	RN1201
	Q517	TRANSISTOR	RN1203
	Q518	TRANSISTOR	2SC1740S
	Q519	TRANSISTOR	2SC1740SLN
	Q520-522	TRANSISTOR	2SA933S
	Q525, 526	TRANSISTOR	2SC1740S
	Q527	TRANSISTOR	2SD880
	Q528	TRANSISTOR	2SC1740S
	D352, 353	DIODE	1SS252
	D501-506	DIODE	1SS252
	D507	ZENER DIODE	RD5.6ESB2
	D508	ZENER DIODE	RD30ESB2
	D509	DIODE	1SS252

COILS AND FILTERS

Mark	No.	Description	Part No.
	L501	FM DETECTION COIL	ATE-067
	L502, 503	AXIAL INDUCTOR	LAU2R2M
	L504	COIL	ATC-249
	L505	AXIAL INDUCTOR	LAU2R2M
	L506	COIL	ATC-226
	L507	AXIAL INDUCTOR	LAU120K
	L508	AXIAL INDUCTOR	LAUR47M
	L509	AXIAL INDUCTOR	LAU1R2M
	L510, 511	COIL	ATC-226
	L512		LAUR22M
	L513, 514	AXIAL INDUCTOR	LAU2R2M
	L515	COIL	ATC-254
	F501	CERAMIC FILTER	ATF-166
	F502	CERAMIC TRAP	ATF-114
	F503	SAW FILTER	ATF1019
	F504	SAW FILTER	ATF1046

CAPACITORS

Mark	No.	Description	Part No.
	C351	ELECTR. CAPACITOR	CEAS102M10
	C353-356	ELECTR. CAPACITOR	CEAS010M50
	C359, 360	ELECTR. CAPACITOR	CEAS2R2M50
	C361, 362	CERAMIC CAPACITOR	CKDYF103Z50
	C364, 365	ELECTR. CAPACITOR	CEJA220M10
	C367	ELECTR. CAPACITOR	CEAS101M16
	C368	ELECTR. CAPACITOR	CEJA220M10
	C369	ELECTROLYTIC CAPACIT	CEJA220M10
	C372	ELECTR. CAPACITOR	CEAS220M16
	C373	ELECTR. CAPACITOR	CEAS100M25
	C374, 376	ELECTR. CAPACITOR	CEAS010M50
	C379	ELECTR. CAPACITOR	CEAS332M16
	C380-383	CERAMIC CAPACITOR	CKDYF103Z50
	C387	ELECTR. CAPACITOR	CEAS220M16
	C491	AUDIO FILM CAPACITOR	CFTXA473J50
	C492	ELECTR. CAPACITOR	CEAS4R7M50
	C493	ELECTR. CAPACITOR	CEAS101M10
	C494	ELECTR. CAPACITOR	CEAS4R7M50
	C495	MYLOR FILM CAPACITOR	CQMA103J50
	C496	CERAMIC CAPACITOR	CKDYB102K50
	C497	ELECTR. CAPACITOR	CEAS4R7M50
	C498	ELECTR. CAPACITOR	CEAS2R2M50
	C499	ELECTR. CAPACITOR	CEAS470M16
	C500	CERAMIC CAPACITOR	CKDYF473Z50
	C501	CERAMIC CAPACITOR	CKDYB222K50
	C502	ELECTR. (3.3μ/50V)	ACH1128
	C503	MYLOR FILM CAPACITOR	CQMA563J50
	C504	CERAMIC CAPACITOR	CKDYB102K50
	C505	CERAMIC CAPACITOR	CKDYF473Z50
	C506	CERAMIC CAPACITOR	CKDYB222K50

Mark	No.	Description	Part No.
	C507	ELECTR. CAPACITOR	CEAS331M16
	C508	ELECTR. CAPACITOR	CEAS010M50
	C509	ELECTR. CAPACITOR	CEAS2R2M50
	C510	ELECTR. (10μ/50V)	ACH1129
	C511	CERAMIC CAPACITOR	CKDYB392K50
	C512	CERAMIC CAPACITOR	CKDYB102K50
	C513	ELECTROLYTIC CAPACIT	CEANP4R7M50
	C514	CERAMIC CAPACITOR	CKDYF103Z50
	C515	CERAMIC CAPACITOR	CKDYF473Z50
	C517	CERAMIC CAPACITOR	CCMCH050C50
	C518	MYLOR FILM CAPACITOR	CQMA272J50
	C519	CERAMIC CAPACITOR	CKDYF473Z50
	C520	ELECTR. CAPACITOR	CEAS331M16
	C521	CERAMIC CAPACITOR	CKDYF103Z50
	C522	CERAMIC CAPACITOR	CKDYB102K50
	C523	ELECTR. CAPACITOR	CEAS010M50
	C524, 525	CERAMIC CAPACITOR	CKDYF103Z50
	C526	ELECTR. CAPACITOR	CEAS100M50
	C527, 528	ELECTR. CAPACITOR	CEAS470M16
	C529	CERAMIC CAPACITOR	CCDRH270J50
	C530	CERAMIC CAPACITOR	CKDYB102K50
	C531	ELECTR. CAPACITOR	CEAS470M16
	C532	ELECTR. CAPACITOR	CEASR47M50
	C533	ELECTR. CAPACITOR	CEAS101M10
	C534	CERAMIC CAPACITOR	CKDYF103Z50
	C535	ELECTR. CAPACITOR	CEAS2R2M50
	C536	ELECTR. CAPACITOR	CEANPR22M50
	C537	CERAMIC CAPACITOR	CCMCH150J50
	C538	CERAMIC CAPACITOR	CCDRH560J50
	C539	CERAMIC CAPACITOR	CCDSL820J50
	C540	CERAMIC CAPACITOR	CKDYF103Z50
	C541	ELECTR. CAPACITOR	CEAS4R7M50
	C542	ELECTR. CAPACITOR	CEAS101M10
	C543	CERAMIC CAPACITOR	CKDYB122K50
	C544	MYLOR FILM CAPACITOR	CQMA123J50
	C545	MYLOR FILM CAPACITOR	CQMA562K50
	C546	CERAMIC CAPACITOR	CKDYF103Z50
	C547	ELECTR. CAPACITOR	CEASR47M50
	C548	ELECTR. CAPACITOR	CEAS4R7M50
	C549	ELECTR. CAPACITOR	CEAS2R2M50
	C550	ELECTR. CAPACITOR	CEAS470M16
	C551, 552	CERAMIC CAPACITOR	CKDYB102K50
	C553	ELECTR. CAPACITOR	CEAS101M16
	C554	CERAMIC CAPACITOR	CKDYF103Z50
	C555	CERAMIC CAPACITOR	CKDYB102K50
	C556	ELECTR. CAPACITOR	CEAS4R7M50
	C557	CERAMIC CAPACITOR	CCMCH050C50
	C558	CERAMIC CAPACITOR	CCMCH040C50
	C559	CERAMIC CAPACITOR	CCDRH560J50
	C560	CERAMIC CAPACITOR	CCMCH050C50
	C561	CERAMIC CAPACITOR	CCMCH040C50
	C562	CERAMIC CAPACITOR	CCDSH470J50
	C563	CERAMIC CAPACITOR	CKDYB102K50
	C564	ELECTR. CAPACITOR	CEAS4R7M50
	C565	CERAMIC CAPACITOR	CKDYF103Z50

Mark	No.	Description	Part No.
	C566	MYLOR FILM CAPACITOR	CQMA333J50
	C567	MYLOR FILM CAPACITOR	CQMA154J50
	C568	CERAMIC CAPACITOR	CKDYF103Z50
	C569, 570	CERAMIC CAPACITOR	CCMCH270J50
	C571	CERAMIC CAPACITOR	CKDYF103Z50
	C572	ELECTR. CAPACITOR	CEAS101M10
	C573	CERAMIC CAPACITOR	CCMSL101J50
	C574	CERAMIC CAPACITOR	CKDYB102K50
	C575	ELECTR. CAPACITOR	CEAS102M16
	C576	CERAMIC CAPACITOR	CKDYB102K50
	C577-580	CERAMIC CAPACITOR	CCMSL101J50
	C581, 582	ELECTR. CAPACITOR	CEAS220M16
	C583	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	No.	Description	Part No.
	VR501-503	VR(4.7K)	ACP1024
	VR504	VR(10K)	ACP1025
	VR505, 506	VR(47K)	ACP1027
	R1148	CARBON FILM RESISTOR	RD1/2PM100J
	R1195	METAL OXIDE RESISTOR	RS3LMF560J
	R1229	CARBON FILM RESISTOR	RD1/4PMFL150J
	R1511	CARBONFILM RESISTOR	RD1/2PMFL3R9J
	R1523, 1526	METALFILM RESISTER	RN1/4PC4702F
	R1529	CARBONFILM RESISTOR	RD1/2PMFL680J
	R1530	CARBONFILM RESISTOR	RD1/4PM221J
	R1531	METALFILM RESISTER	RN1/4PC4302F
	R1541, 1542	METALFILM RESISTER	RN1/4PC□□□□F
	R1588	CARBONFILM RESISTOR	RD1/4PMFL8R2J
	R1610	METAL OXIDE RESISTOR	RS2LMF560J
	R1611	CARBON FILM RESISTOR	RD1/2PM391J
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
	X501	CRYSTAL OSCILLATOR(4.0MHz)	ASS-013
		PHONO JACK 9-P	AKB1133
		JACK(CONTROL OUT)	AKN-207
		SOCKET(S-VIDEO)	AKP1064
		TV FRONT END	AXF1040

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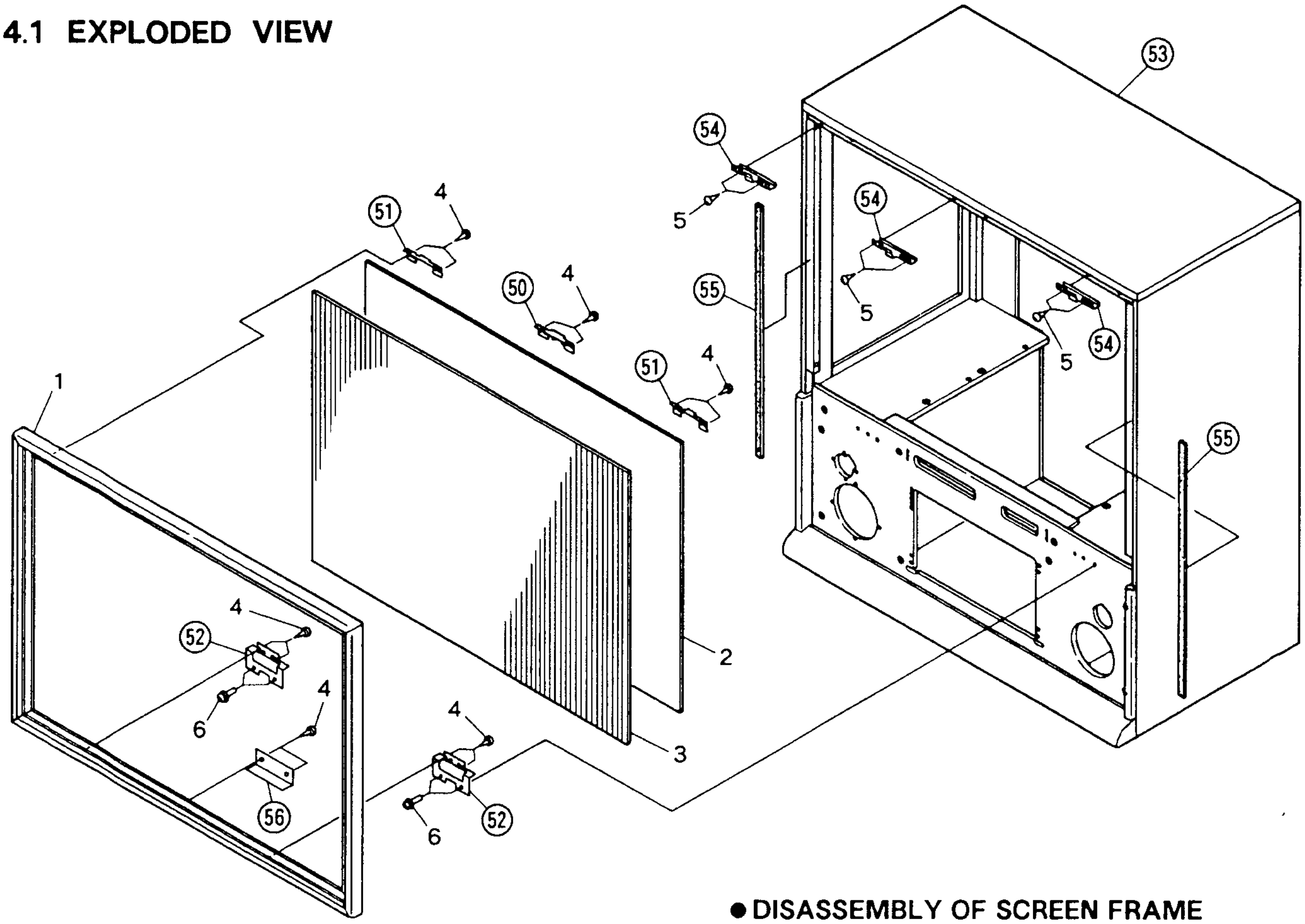
4. EXPLODED VIEWS, PACKING AND PARTS LIST

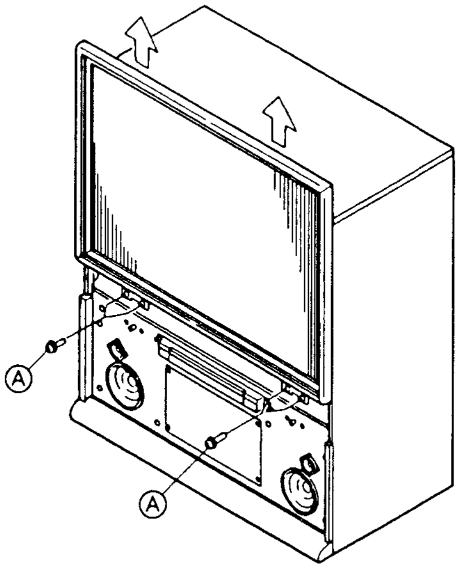
4.1 EXPLODED VIEW



Parts List

Mark	No.	Part No.	Description
	1	AAP1134	Screen frame assembly
	2	AMR2154	Fresnel lens
	3	AMR2157	Lenticular sheet
	4	BYC35P160FZK	Screw
	5	BYC40P200FMC	Screw
	6	ABA1067	Screw
	50		Frame upper holder A
	51		Frame upper holder B
	52		Frame under holder
	53		Cabinet
	54		Upper holder
	55		Cushion
	56		Frame holder

● **DISASSEMBLY OF SCREEN FRAME**

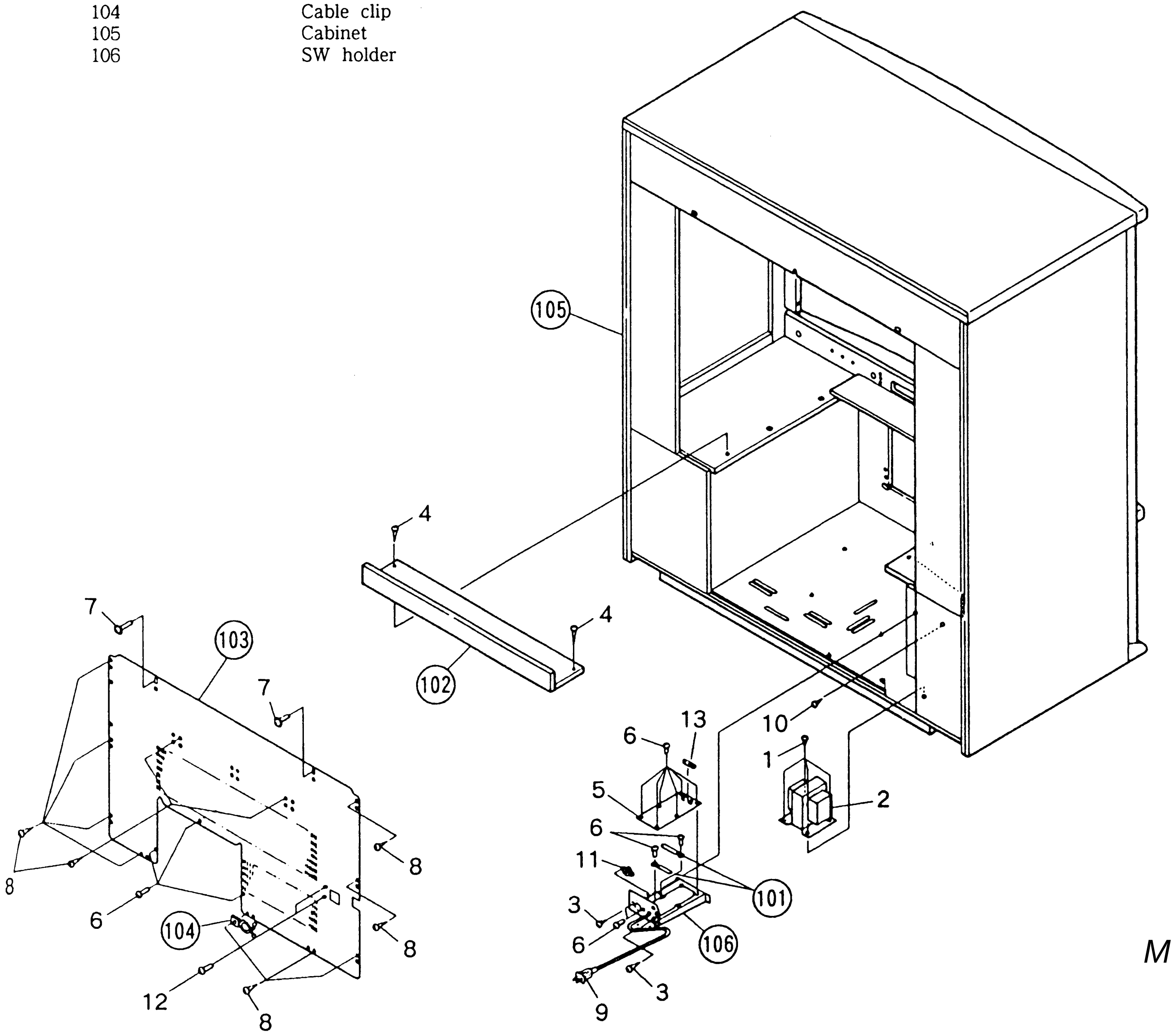


① Remove a Grill F50 and a side panel assembly.
② Remove four screws Ⓐ.
③ Remove a Screen frame by pulling up in the direction of arrow.

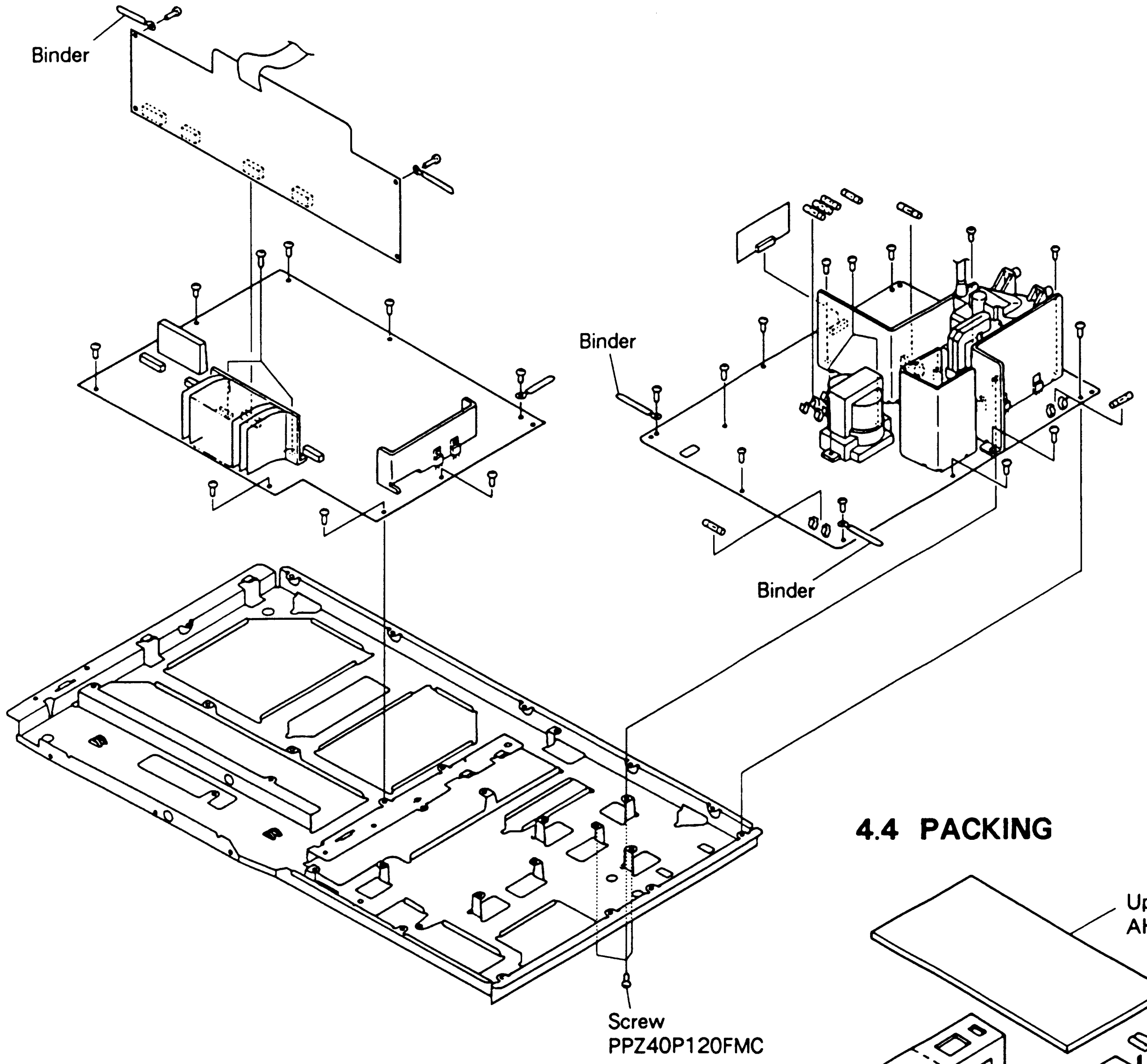
4.2 REAR VIEW

Parts List

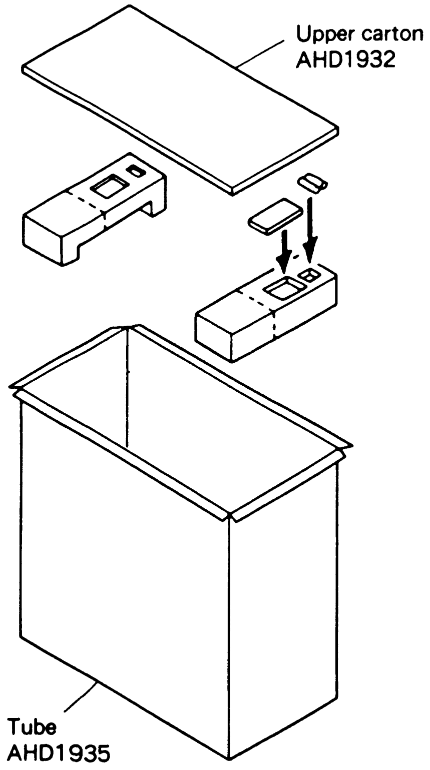
Mark	No.	Part No.	Description
	1	BYC40P160FMC	Screw
⚠	2	ATS1166	Power transformer (T1)
	3	BYC35P160FZK	Screw
	4	BYC40P250FMC	Screw
	5	AWT1006	LINE FILTER assembly
	6	BBZ30P080FZK	Screw
	7	ABA1005	Screw
	8	BYC35P120FZB	Screw
⚠	9	ADG1056	AC power cord
	10	ABA1038	Screw
⚠	11	AKX-502	Voltage selector (S1)
	12	ABA1085	Screw
⚠	13	AEK1002	Fuse (8A, FU659)
	101		Binder
	102		Shield plate
	103		Rear cover
	104		Cable clip
	105		Cabinet
	106		SW holder


105
4
4
102
7
103
7
8
8
6
104
8
12
8
6
13
10
1
5
6
2
11
101
3
6
106
3
9

4.3 CHASSIS BLOCK


Binder
Binder
Binder
Screw
PPZ40P120FMC

4.4 PACKING


Upper carton
AHD1932
Tube
AHD1935

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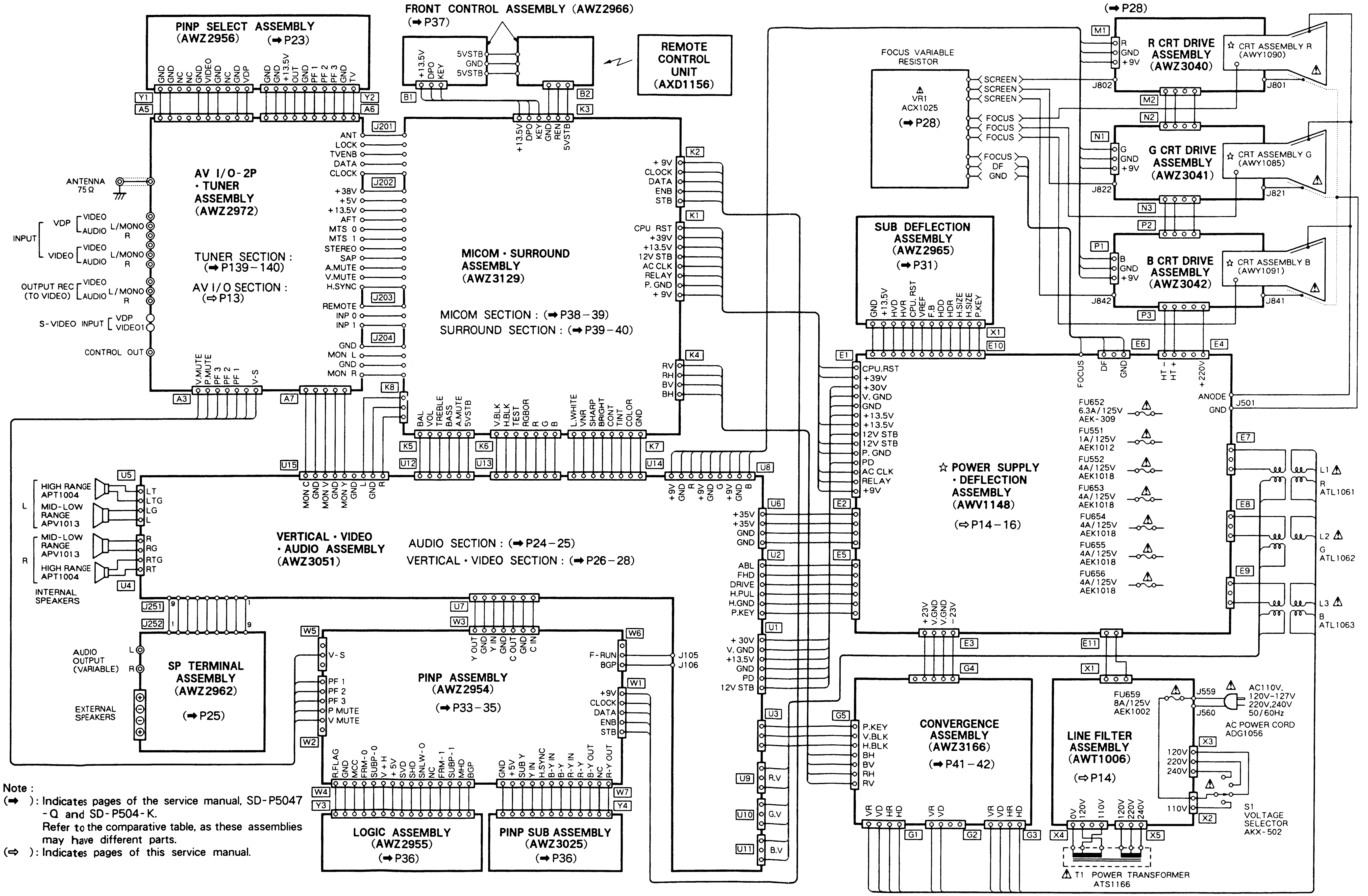
5. SCHEMATIC AND P.C.BOARDS DIAGRAM

5.1 OVERALL WIRING DIAGRAM


PINP SELECT ASSEMBLY (AWZ2956) (➡P23)
GND GND NC GND VIDEO GND NC GND VDP
GND GND +13.5V OUT GND PF 1 PF 2 PF 3 GND TV
Y1 Y2 A5 A6
FRONT CONTROL ASSEMBLY (AWZ2966) (➡P37)
+13.5V DPO KEY
5VSTB GND 5VSTB
B1 B2 K3
REMOTE CONTROL UNIT (AXD1156)
AV I/O-2P · TUNER ASSEMBLY (AWZ2972)
TUNER SECTION : (➡P139−140)
AV I/O SECTION : (⇨P13)
ANTENNA 75Ω
INPUT VDP VIDEO AUDIO L/MONO R
VIDEO VIDEO AUDIO L/MONO R
OUTPUT REC (TO VIDEO) VIDEO AUDIO L/MONO R
S-VIDEO INPUT VDP VIDEO1
CONTROL OUT
V.MUTE P.MUTE PF 3 PF 2 PF 1 V-S
A3 A7
J201 ANT LOCK TVENB DATA CLOCK
J202 +38V +5V +13.5V AFT MTS 0 MTS 1 STEREO SAP A.MUTE V.MUTE H.SYNC
J203 REMOTE INP 0 INP 1
J204 GND MON L GND MON R
K8
MICOM · SURROUND ASSEMBLY (AWZ3129)
MICOM SECTION : (➡P38−39)
SURROUND SECTION : (➡P39−40)
+13.5V DPO KEY GND REN 5VSTB
K2 +9V CLOCK DATA ENB STB
K1 CPU RST +39V +13.5V 12V STB AC CLK RELAY P. GND +9V
K4 RV RH BV BH
BAL VOL TREBLE BASS A.MUTE 5VSTB
V.BLK H.BLK TEST RGBOR R G B
L.WHITE VNR SHARP BRIGHT CONT TINT COLOR GND
K5 K6 K7
U15 U12 U13 U14 U8
MON C GND MON Y GND MON Y GND L GND R
+9V GND R +9V GND G +9V GND B
U5 LT LTG LG L
HIGH RANGE APT1004
MID-LOW RANGE APV1013
MID-LOW RANGE APV1013
HIGH RANGE APT1004
R RG RTG RT U4
INTERNAL SPEAKERS
VERTICAL · VIDEO · AUDIO ASSEMBLY (AWZ3051)
AUDIO SECTION : (➡P24−25)
VERTICAL · VIDEO SECTION : (➡P26−28)
U6 +35V +35V GND GND
U2 ABL FHD DRIVE H.PUL H.GND P.KEY
U1 +30V V. GND +13.5V GND PD 12V STB
U3
U9 R.V U10 G.V U11 B.V
J251 J252
SP TERMINAL ASSEMBLY (AWZ2962) (➡P25)
AUDIO OUTPUT (VARIABLE) L R
EXTERNAL SPEAKERS
U7 W3
W5 V-S
PF 1 PF 2 PF 3 P MUTE V MUTE
W2
Y OUT GND Y IN GND C OUT GND C IN
W6 F-RUN BGP J105 J106
W1 +9V CLOCK DATA ENB STB
PINP ASSEMBLY (AWZ2954) (➡P33−35)
R.FLAG GND MCC FRM-0 SUBP-0 V + H +5V SVD SHD SNLW-0 NC FRM-1 SUBP-1 MHD BGP
GND +5V SUB Y Y IN H.SYNC B-Y IN B-Y R-Y IN R-Y B-Y OUT NC R-Y OUT
W4 Y3 W7 Y4
LOGIC ASSEMBLY (AWZ2955) (➡P36)
PINP SUB ASSEMBLY (AWZ3025) (➡P36)
FOCUS VARIABLE RESISTOR
⚠ VR1 ACX1025 (➡P28)
SCREEN SCREEN SCREEN FOCUS FOCUS FOCUS FOCUS DF GND
R. G. B. CRT DRIVE ASSEMBLIES (➡P28)
M1 R GND +9V R CRT DRIVE ASSEMBLY (AWZ3040) J802 J801 M2
☆ CRT ASSEMBLY R (AWY1090)
N2 N1 G GND +9V G CRT DRIVE ASSEMBLY (AWZ3041) J822 J821 N3
☆ CRT ASSEMBLY G (AWY1085)
P2 P1 B GND +9V B CRT DRIVE ASSEMBLY (AWZ3042) J842 J841 P3
☆ CRT ASSEMBLY B (AWY1091)
SUB DEFLECTION ASSEMBLY (AWZ2965) (➡P31)
GND +13.5V HVD HVR CPU. RST VREF F.B HDD HDR H.SIZE H.SIZE P.KEY
X1 E10 E1 E6 E4
FOCUS DF GND HT− HT+ +220V
ANODE GND J501
CPU.RST +39V +30V V. GND GND +13.5V +13.5V 12V STB 12V STB P. GND PD AC CLK RELAY +9V
☆ POWER SUPPLY · DEFLECTION ASSEMBLY (AWV1148) (⇨P14−16)
FU652 6.3A/125V AEK-309
FU551 1A/125V AEK1012
FU552 4A/125V AEK1018
FU653 4A/125V AEK1018
FU654 4A/125V AEK1018
FU655 4A/125V AEK1018
FU656 4A/125V AEK1018
E2 E5 E7 E8 E9
L1 ⚠ R ATL1061
L2 ⚠ G ATL1062
L3 ⚠ B ATL1063
+23V V.GND V.GND −23V
E3 E11 G4 X1
G5 P.KEY V.BLK H.BLK BH BV RH RV
CONVERGENCE ASSEMBLY (AWZ3166) (➡P41−42)
VR VD HR HD VR VD VR VD HR HD
G1 G2 G3
LINE FILTER ASSEMBLY (AWT1006) (⇨P14)
FU659 8A/125V AEK1002
J559 J560
⚠ AC110V, 120V−127V 220V,240V 50/60Hz
AC POWER CORD ADG1056
X3 120V 220V 240V 110V X2
S1 VOLTAGE SELECTOR AKX-502
0V 120V 110V 120V 220V 240V
X4 X5
⚠ T1 POWER TRANSFORMER ATS1166
A B C D

Note :

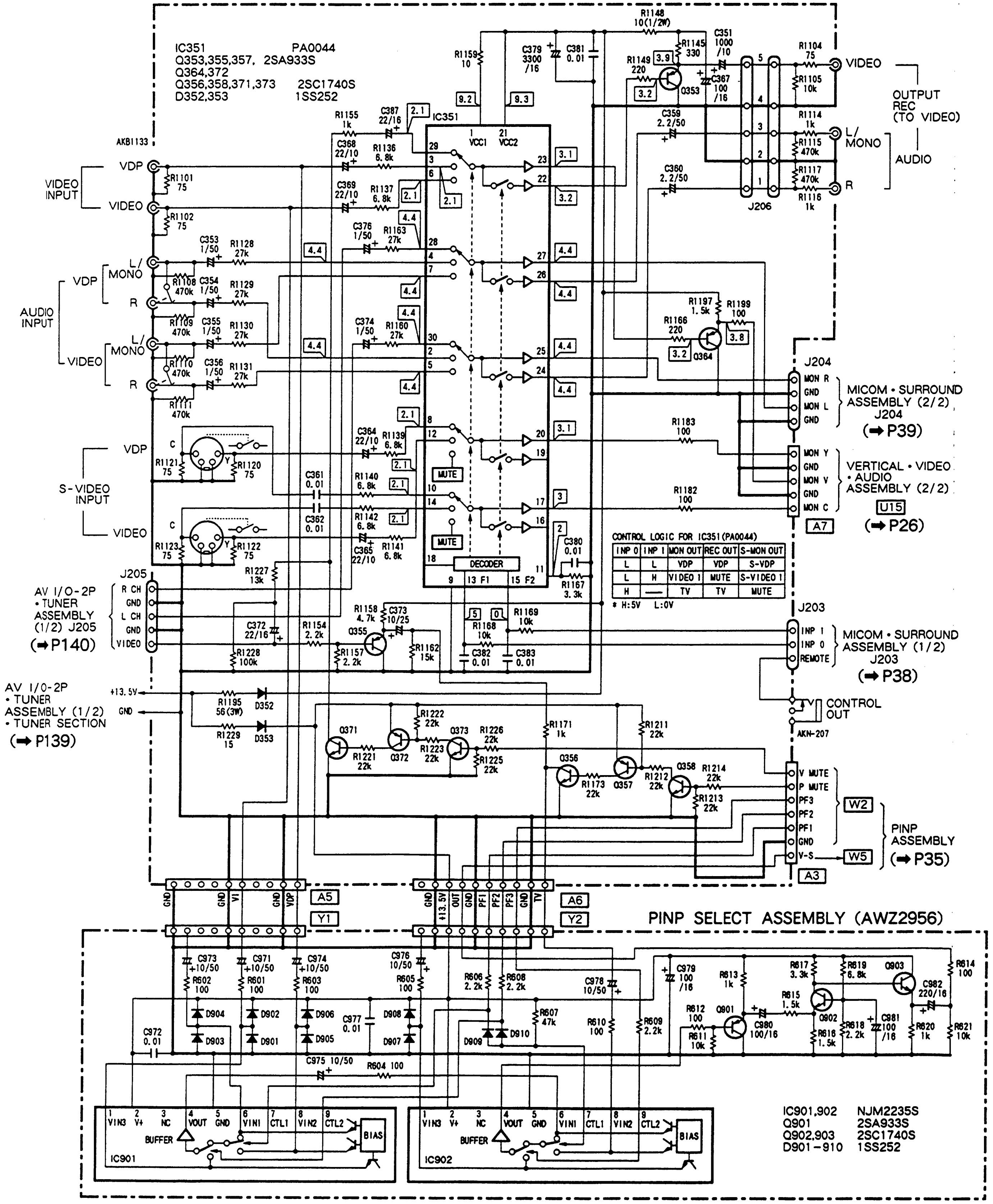
(➡) : Indicates pages of the service manual, SD-P5047 -Q and SD-P504-K. Refer to the comparative table, as these assemblies may have different parts.

(⇨) : Indicates pages of this service manual.

5.2 AV I/O-2P • TUNER ASSEMBLY (2/2 : AV I/O SECTION) AND PINP SELECT ASSEMBLY

Note: Schematic diagram of TUNER section of the AV I/O-2P • TUNER assembly (1/2) is the same as the SD-P504-K/KUX1C type.

AV I/O-2P • TUNER ASSEMBLY (2/2) (AWZ2972)
●AV I/O SECTION


A
B
C
D
IC351 PA0044
Q353,355,357, 2SA933S
Q364,372
Q356,358,371,373 2SC1740S
D352,353 1SS252
AKB1133
VIDEO INPUT
VDP
VIDEO
AUDIO INPUT
L/MONO
R
S-VIDEO INPUT
J205
AV I/O-2P • TUNER ASSEMBLY (1/2) J205 (➡P140)
R CH
GND
L CH
GND
VIDEO
AV I/O-2P • TUNER ASSEMBLY (1/2) • TUNER SECTION (➡P139)
+13.5V
GND
VCC1
VCC2
DECODER
MUTE
VIDEO
OUTPUT REC (TO VIDEO)
L/MONO
AUDIO
J206
J204
MON R
GND
MON L
GND
MICOM • SURROUND ASSEMBLY (2/2) J204 (➡P39)
MON Y
MON V
MON C
VERTICAL • VIDEO • AUDIO ASSEMBLY (2/2) U15 (➡P26)
A7
J203
INP 1
INP 0
REMOTE
MICOM • SURROUND ASSEMBLY (1/2) J203 (➡P38)
CONTROL OUT
AKN-207
V MUTE
P MUTE
PF3
PF2
PF1
GND
V-S
W2
W5
PINP ASSEMBLY (➡P35)
A3
A5
Y1
A6
Y2
PINP SELECT ASSEMBLY (AWZ2956)
IC901
IC902
BUFFER
BIAS
VIN3 V+ NC VOUT GND VIN1 CTL1 VIN2 CTL2
IC901,902 NJM2235S
Q901 2SA933S
Q902,903 2SC1740S
D901-910 1SS252

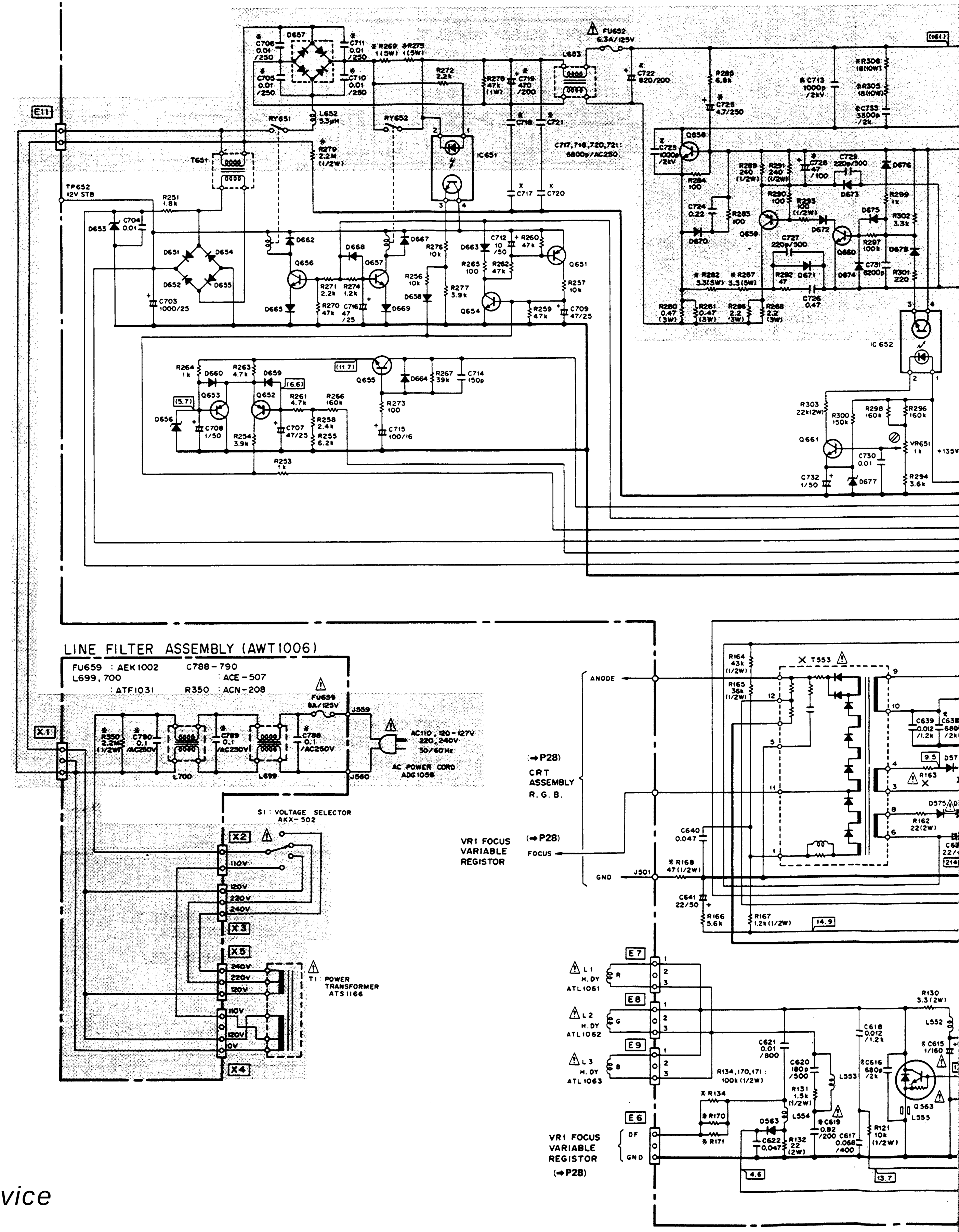
CONTROL LOGIC FOR IC351(PA0044)

INP 0	INP 1	MON OUT	REC OUT	S-MON OUT
L	L	VDP	VDP	S-VDP
L	H	VIDEO 1	MUTE	S-VIDEO 1
H	—	TV	TV	MUTE

* H:5V L:0V

5.3 POWER SUPPLY • DEFLECTION, LINE FILTER AND SUB DEFLECTION ASSEMBLIES

☆POWER SUPPLY DEFLECTION ASSEMBLY (AWV1148)


E11
TP652 12V STB
T651
RY651
RY652
IC651
IC652
FU652 6.3A/125V
L653
L652 53μH
C717,718,720,721: 6800p/AC250
LINE FILTER ASSEMBLY (AWT1006)
FU659 : AEK1002
L699, 700 : ATF1031
C788-790 : ACE-507
R350 : ACN-208
FU659 8A/125V
X1
J559
J560
L700
L699
AC110, 120-127V 220, 240V 50/60Hz
AC POWER CORD ADG1056
S1 : VOLTAGE SELECTOR AKX-302
X2
110V
120V
220V
240V
X3
X5
X4
T1 : POWER TRANSFORMER ATS1166
ANODE
(➡P28) CRT ASSEMBLY R.G.B.
VR1 FOCUS VARIABLE REGISTOR
(➡P28) FOCUS
GND
J501
T553
E7
E8
E9
E6
L1 H.DY ATL1061
L2 H.DY ATL1062
L3 H.DY ATL1063
VR1 FOCUS VARIABLE REGISTOR (➡P28)
DF
GND
L553
L554
L555
Q563
D563

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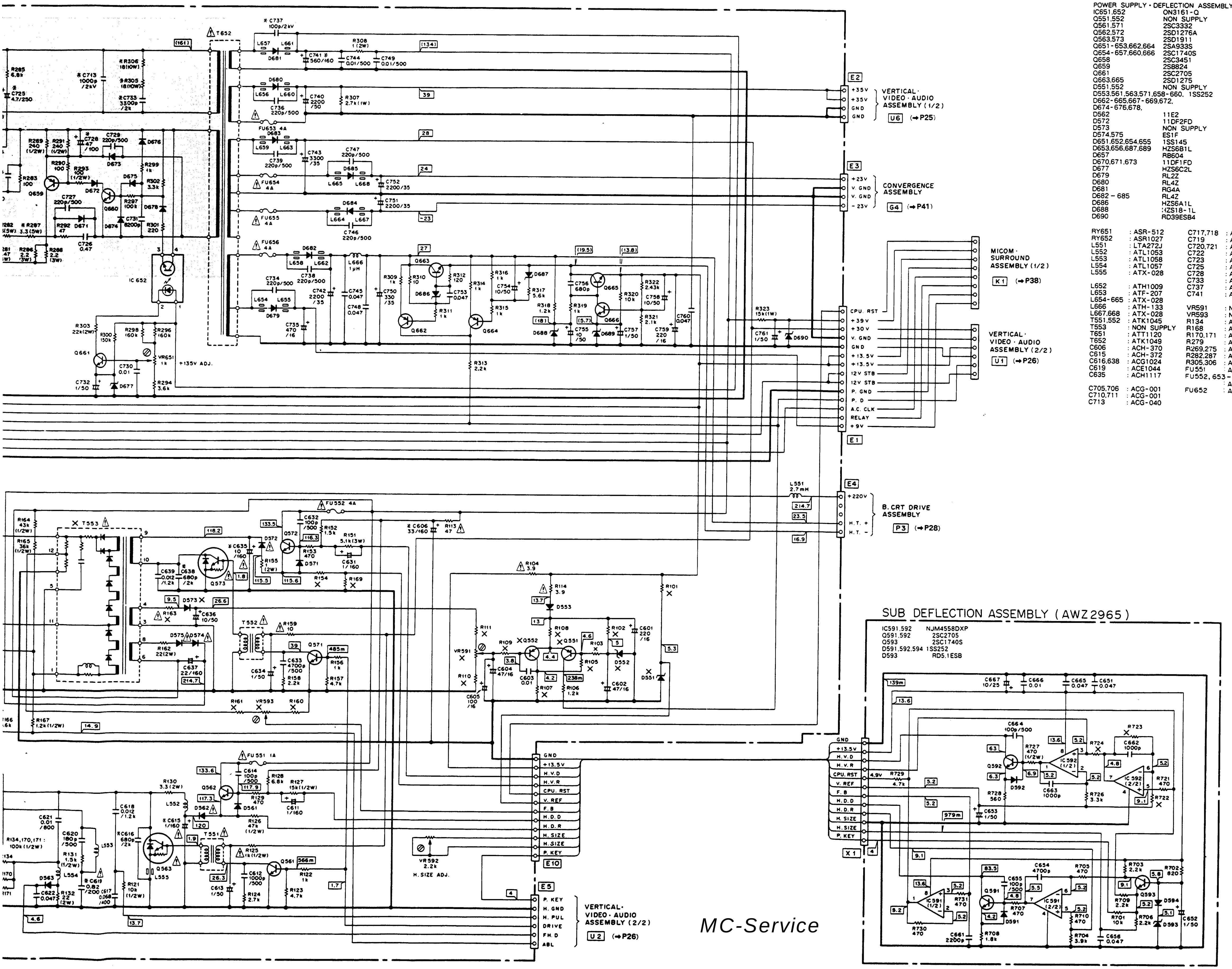
EFLECTION ASSEMBLIES


A
B
C
D
E2
+35V
+35V
GND
GND
VERTICAL · VIDEO · AUDIO ASSEMBLY (1/2)
U6 (→P25)
E3
+23V
V. GND
V. GND
– 23V
CONVERGENCE ASSEMBLY
G4 (→P41)
MICOM · SURROUND ASSEMBLY (1/2)
K1 (→P38)
CPU. RST
+39V
+30V
V. GND
GND
+13.5V
+13.5V
12V STB
12V STB
P. GND
P. D
A.C. CLK
RELAY
+9V
E1
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2)
U1 (→P26)
E4
+220V
H.T. +
H.T. –
B. CRT DRIVE ASSEMBLY
P3 (→P28)
T652
T553
T552
T551
IC 652
VR651
+135V ADJ.
VR591
VR593
VR592
2.2k
H. SIZE ADJ.
E10
GND
+13.5V
H.V.D
H.V.R
CPU. RST
V. REF
F.B
H.D.D
H.D.R
H.SIZE
H.SIZE
P. KEY
E5
P. KEY
H. GND
H. PUL
DRIVE
FH. D
ABL
VERTICAL · VIDEO · AUDIO ASSEMBLY (2/2)
U2 (→P26)
X1
IC591 (1/2)
IC591 (2/2)
IC592 (1/2)
IC592 (2/2)

SUB DEFLECTION ASSEMBLY (AWZ2965)

IC591,592	NJM4558DXP
Q591,592	2SC2705
Q593	2SC1740S
D591,592,594	1SS252
D593	RD5.1ESB

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POWER SUPPLY · DEFLECTION ASSEMBLY

IC651,652	ON3161-Q
Q551,552	NON SUPPLY
Q561,571	2SC3332
Q562,572	2SD1276A
Q563,573	2SD1911
Q651-653,662,664	2SA933S
Q654-657,660,666	2SC1740S
Q658	2SC3451
Q659	2SB824
Q661	2SC2705
Q663,665	2SD1275
D551,552	NON SUPPLY
D553,561,563,571,658-660, D662-665,667-669,672, D674-676,678,	1SS252
D562	11E2
D572	11DF2FD
D573	NON SUPPLY
D574,575	ES1F
D651,652,654,655	1SS145
D653,656,687,689	HZS6B1L
D657	RB604
D670,671,673	11DF1FD
D677	HZS6C2L
D679	RL2Z
D680	RL4Z
D681	RG4A
D682 – 685	RL4Z
D686	HZS6A1L
D688	HZS18-1L
D690	RD39ESB4

RY651	: ASR-512	C717,718	: ACE1009
RY652	: ASR1027	C719	: ACH1147
L551	: LTA272J	C720,721	: ACE1009
L552	: ATL1053	C722	: ACH1148
L553	: ATL1058	C723	: ACG-040
L554	: ATL1057	C725	: ACH-378
L555	: ATX-028	C728	: ACH1132
		C733	: ACG1008
L652	: ATH1009	C737	: ACG-032
L653	: ATF-207	C741	: ACH1146
L654-665	: ATX-028		
L666	: ATH-133	VR591	: NON SUPPLY
L667,668	: ATX-028	VR593	: NON SUPPLY
T551,552	: ATK1045	R134	: ACN1074
T553	: NON SUPPLY	R168	: ACN-225
T651	: ATT1120	R170,171	: ACN1074
T652	: ATK1049	R279	: ACN-208
C606	: ACH-370	R269,275	: ACN1032
C615	: ACH-372	R282,287	: ACN1050
C616,638	: ACG1024	R305,306	: ACN1057
C619	: ACE1044	FU551	: AEK1012
C635	: ACH1117	FU552, 653-656	: AEK1018
C705,706	: ACG-001	FU652	: AEK-309
C710,711	: ACG-001		
C713	: ACG-040		

1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ± 1%, (G) ; ± 2%, (K) ; ± 10%, (M) ; ± 20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT :
▭ ; DC voltage (V) at no input signal without notice.
Value in ( ) is color bar signal input state.
⇦mA ; DC current at no input signal without notice.

4. OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point.

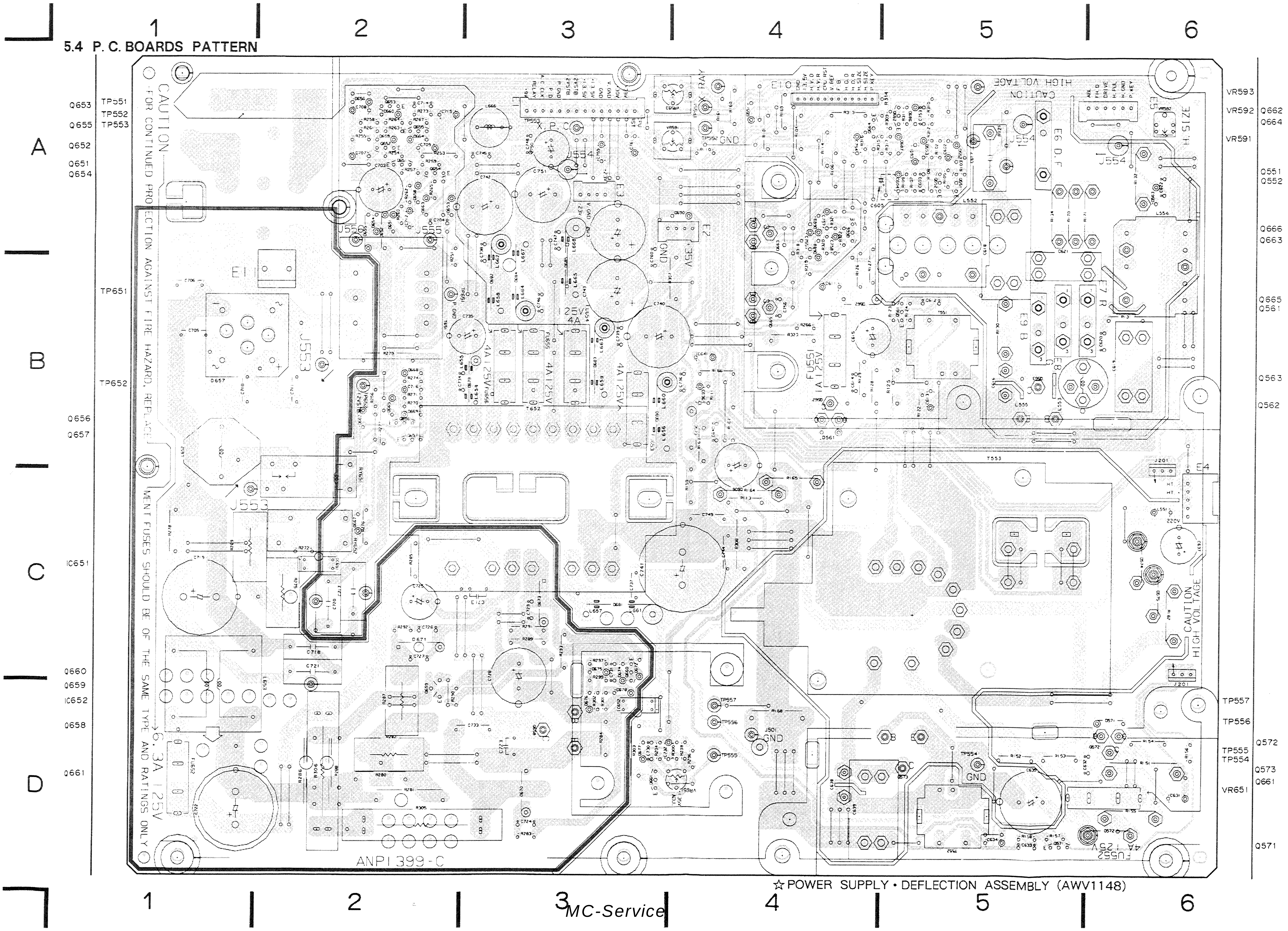
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- ※ marked capacitors and resistors have parts numbers.
- Parts marked by ☆ are important parts which use X-rays. If any of these parts need to be replaced, always replace with specified parts.
- Parts marked by × are important parts which use X-rays. If a failure occurs in any of these parts, replace the printed circuit board assembly where the relevant part has already been adjusted as a working component. Do not replace the actual part itself.
If any part marked by × is replaced, there is danger of being exposed to X-rays.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES : (The underlined indicates the switch position)
S1 : VOLTAGE SELECTOR
AC110V—AC120-127V—AC220V—AC240V

▨ : CHARGED SECTION

5.4 P. C. BOARDS PATTERN


1
2
3
4
5
6
A
B
C
D
Q653
TP551
TP552
Q655
TP553
Q652
Q651
Q654
TP651
TP652
Q656
Q657
IC651
Q660
Q659
IC652
Q658
Q661
VR593
VR592
Q662
Q664
VR591
Q551
Q552
Q666
Q663
Q665
Q561
Q563
Q562
TP557
TP556
Q572
TP555
TP554
Q573
Q661
VR651
Q571
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE MENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY
6.3A 125V
CAUTION
HIGH VOLTAGE
H. SIZE
X RAY
GND
J554
E6 D.F
E7 R
E9 B
E8
E4
J201
T553
220V
FU551
1A 125V
FU552
4A 125V
4A125V
125V 4A
135V
J553
J556
J555
E11
E3
E2
E5
E10
E12
E13
T551
T652
L552
L554
L555
VR591
VR651
ANP1399-C

☆POWER SUPPLY • DEFLECTION ASSEMBLY (AWV1148)

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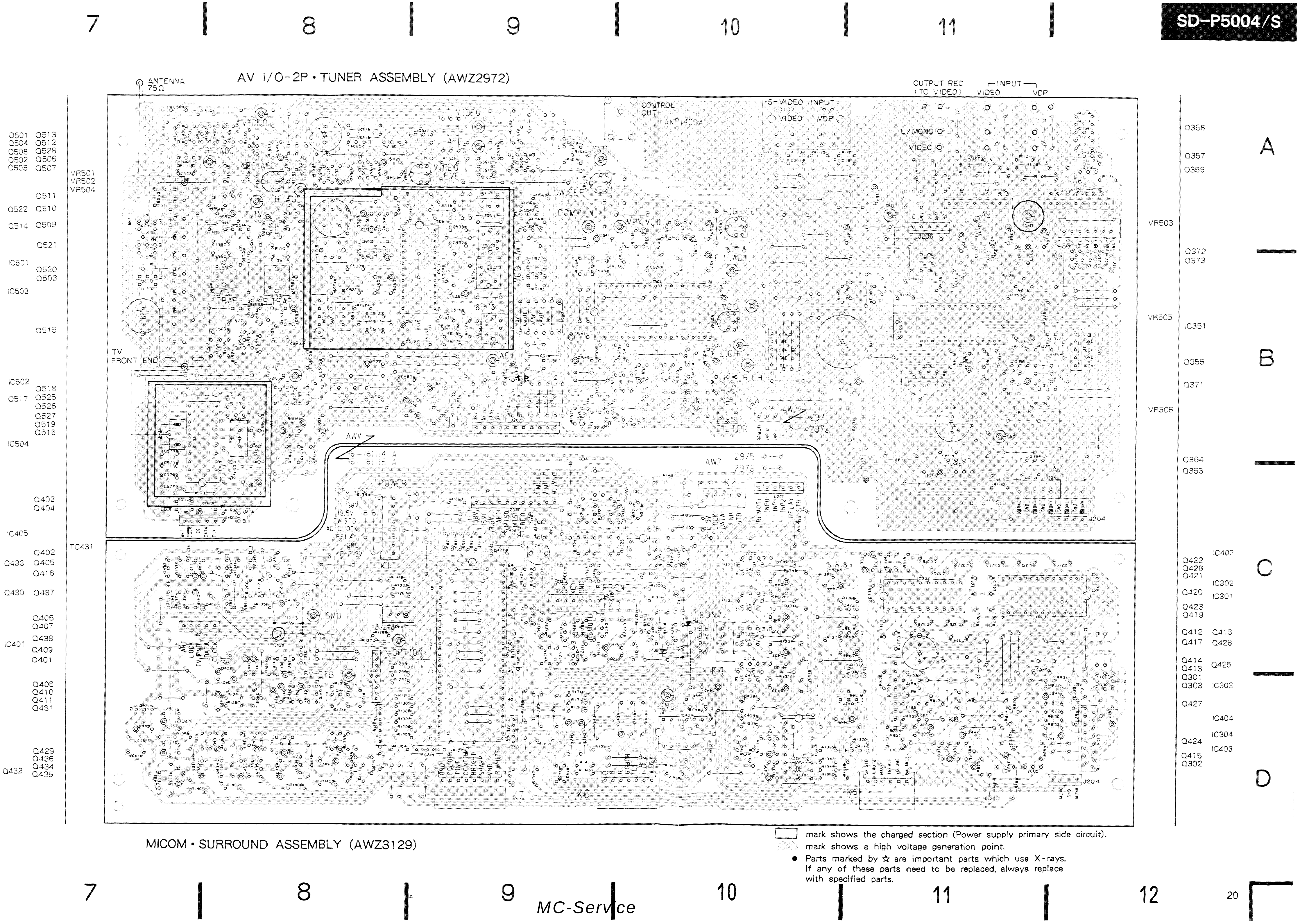
AV I/O-2P • TUNER ASSEMBLY (AWZ2972)


7
8
9
10
11
12
A
B
C
D
ANTENNA 75Ω
Q501 Q513
Q504 Q512
Q508 Q528
Q502 Q506
Q505 Q507
VR501
VR502
VR504
Q511
Q522 Q510
Q514 Q509
Q521
IC501
Q520
Q503
IC503
Q515
IC502
Q517 Q518
Q525
Q526
Q527
Q519
Q516
IC504
Q403
Q404
IC405
TC431
Q402
Q433 Q405
Q416
Q430 Q437
Q406
Q407
IC401 Q438
Q409
Q401
Q408
Q410
Q411
Q431
Q429
Q436
Q432 Q434
Q435
Q358
Q357
Q356
VR503
Q372
Q373
VR505
IC351
Q355
Q371
VR506
Q364
Q353
Q422 IC402
Q426
Q421
Q420 IC302
IC301
Q423
Q419
Q412 Q418
Q417 Q428
Q414 Q425
Q413
Q301
Q303 IC303
Q427
IC404
IC304
Q424 IC403
Q415
Q302
CONTROL OUT
ANP1400A
S-VIDEO INPUT
VIDEO
VDP
OUTPUT REC (TO VIDEO)
INPUT
VIDEO
VDP
R
L/MONO
VIDEO
RF AGC
IF AGC
VIDEO LEVEL
APC
VIDEO
LOW SEP
COMP IN
MPX VCO
HIGH SEP
FIL ADJ
VCO
AFT
L CH
R CH
FILTER
SAD TRAP
S TRAP
TV FRONT END
AWV
AWZ
2975
2976
2972
CPU RESET
POWER
K1
K2
K3
K4
K5
K6
K7
K8
GND
OPTION
5V STB
FRONT
CONV
J204
J206
A5
A6
A3
A7

MICOM • SURROUND ASSEMBLY (AWZ3129)

▭ mark shows the charged section (Power supply primary side circuit).
▨ mark shows a high voltage generation point.

- Parts marked by ☆ are important parts which use X-rays. If any of these parts need to be replaced, always replace with specified parts.

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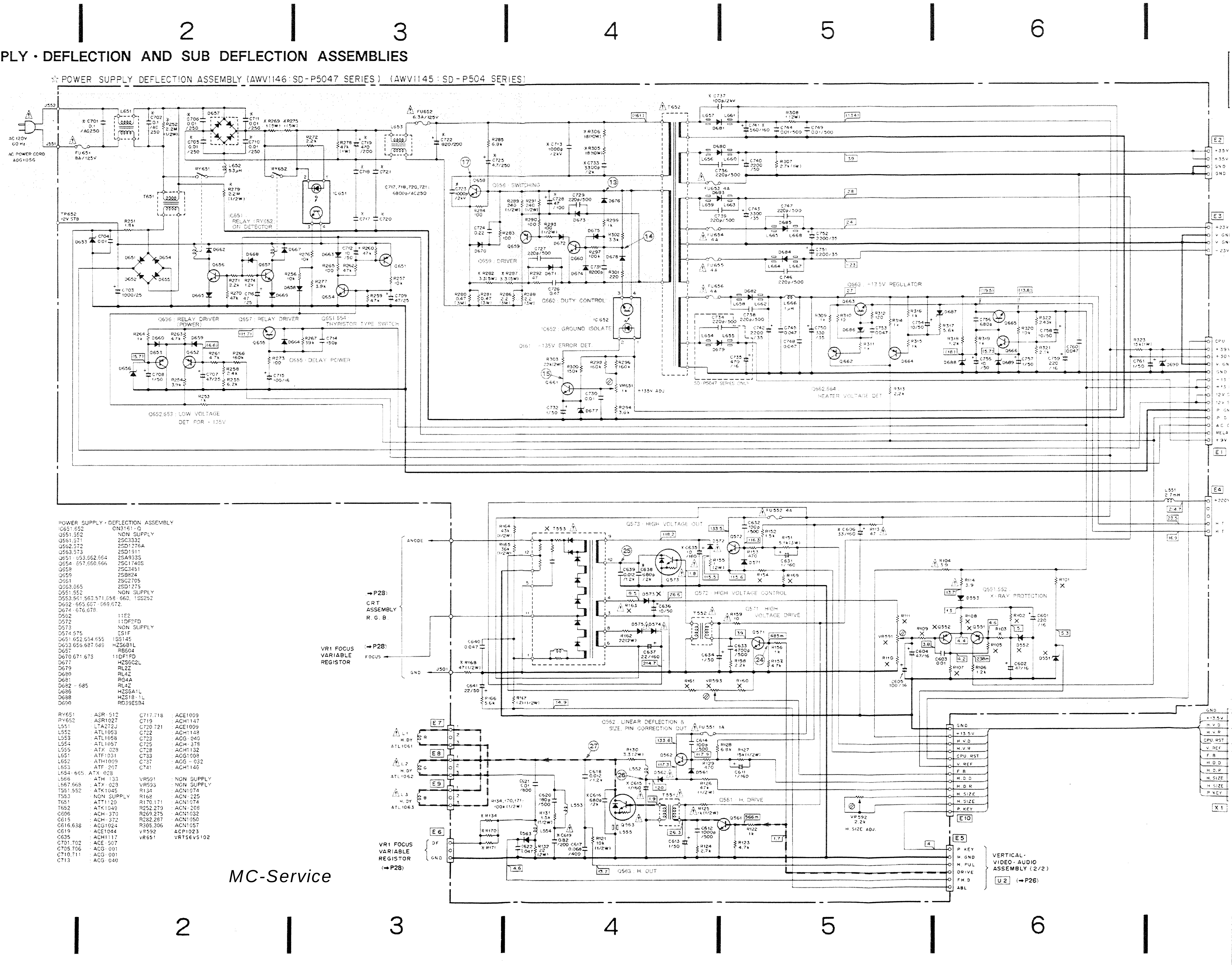
7.5 POWER SUPPLY · DEFLECTION AND SUB DEFLECTION ASSEMBLIES


1
2
3
4
5
6
A
B
C
D
☆ POWER SUPPLY DEFLECTION ASSEMBLY (AWV1146 : SD-P5047 SERIES) (AWV1145 : SD-P504 SERIES)
AC 120V 60 Hz
AC POWER CORD ADG1056
FU651 8A/125V
FU652 6.3A/125V
TP652 12V STB
RY651
RY652
IC651 RELAY (RY652) ON DETECTOR
Q656 : SWITCHING
Q659 : DRIVER
Q660 : DUTY CONTROL
IC652 : GROUND ISOLATE
Q661 : 135V ERROR DET
VR651 +135V ADJ
Q656 : RELAY DRIVER (POWER)
Q657 : RELAY DRIVER
Q651,654 : THYRISTOR TYPE SWITCH
Q655 : DELAY POWER
Q652,653 : LOW VOLTAGE DET FOR +135V
Q663 : +13.5V REGULATOR
Q662,664 : HEATER VOLTAGE DET
SD-P5047 SERIES ONLY
T652
Q573 : HIGH VOLTAGE OUT
Q572 : HIGH VOLTAGE CONTROL
Q571 : HIGH VOLTAGE DRIVE
Q551,552 : X-RAY PROTECTION
Q562 : LINEAR DEFLECTION & SIZE, PIN CORRECTION OUT
Q561 : H. DRIVE
Q563 : H. OUT
T553
ANODE
FOCUS
GND
→P28
CRT ASSEMBLY R.G.B.
VR1 FOCUS VARIABLE REGISTOR
VR1 FOCUS VARIABLE REGISTOR (→P28)
L1 H. DY ATL1061
L2 H. DY ATL1062
L3 H. DY ATL1063
VR592 2.2k H. SIZE ADJ.
VERTICAL·VIDEO·AUDIO ASSEMBLY (2/2)
U2 (→P26)
E1
E2
E3
E4
E5
E6
E7
E8
E9
E10
X1
GND
+13.5V
H.V.D
H.V.R
CPU RST
V.REF
F.B
H.D.D
H.D.R
H.SIZE
H.SIZE
P.KEY
H.GND
H.PUL
DRIVE
FHD
ABL

POWER SUPPLY · DEFLECTION ASSEMBLY

IC651,652	ON3161 - Q
Q551,552	NON SUPPLY
Q561,571	2SC3332
Q562,572	2SD1276A
Q563,573	2SD1911
Q651 - 653,662,664	2SA933S
Q654 - 657,660,666	2SC1740S
Q658	2SC3451
Q659	2SB824
Q661	2SC2705
Q663,665	2SD1275
D551,552	NON SUPPLY
D553,561,563,571,658 - 660, D662 - 665,667 - 669,672, D674 - 676,678.	1SS252
D562	11E2
D572	11DF2FD
D573	NON SUPPLY
D574,575	ES1F
D651,652,654,655	1SS145
D653,656,687,689	HZS6B1L
D657	RB604
D670,671,673	11DF1FD
D677	HZS6C2L
D679	RL2Z
D680	RL4Z
D681	RG4A
D682 - 685	RL4Z
D686	HZS5A1L
D688	HZS18 - 1L
D690	RD39ESB4

RY651	: ASR - 512	C717,718	: ACE1009
RY652	: ASR1027	C719	: ACH1147
L551	: LTA272J	C720,721	: ACE1009
L552	: ATL1053	C722	: ACH1148
L553	: ATL1058	C723	: ACG - 040
L554	: ATL1057	C725	: ACH - 378
L555	: ATX - 028	C728	: ACH1132
L651	: ATF1031	C733	: ACG1008
L652	: ATH1009	C737	: ACG - 032
L653	: ATF - 207	C741	: ACH1146
L654 - 665,	ATX - 028		
L666	: ATH - 133	VR591	: NON SUPPLY
L667,668	: ATX - 028	VR593	: NON SUPPLY
T551,552	: ATK1045	R134	: ACN1074
T553	: NON SUPPLY	R168	: ACN - 225
T651	: ATT1120	R170,171	: ACN1074
T652	: ATK1049	R252,270	: ACN - 208
C606	: ACH - 370	R269,275	: ACN1032
C615	: ACH - 372	R282,287	: ACN1050
C616,638	: ACG1024	R305,306	: ACN1057
C619	: ACE1044	VR592	: ACP1023
C635	: ACH1117	VR651	: VRTS6VS102
C701,702	: ACE - 507		
C705,706	: ACG - 001		
C710,711	: ACG - 001		
C713	: ACG - 040		

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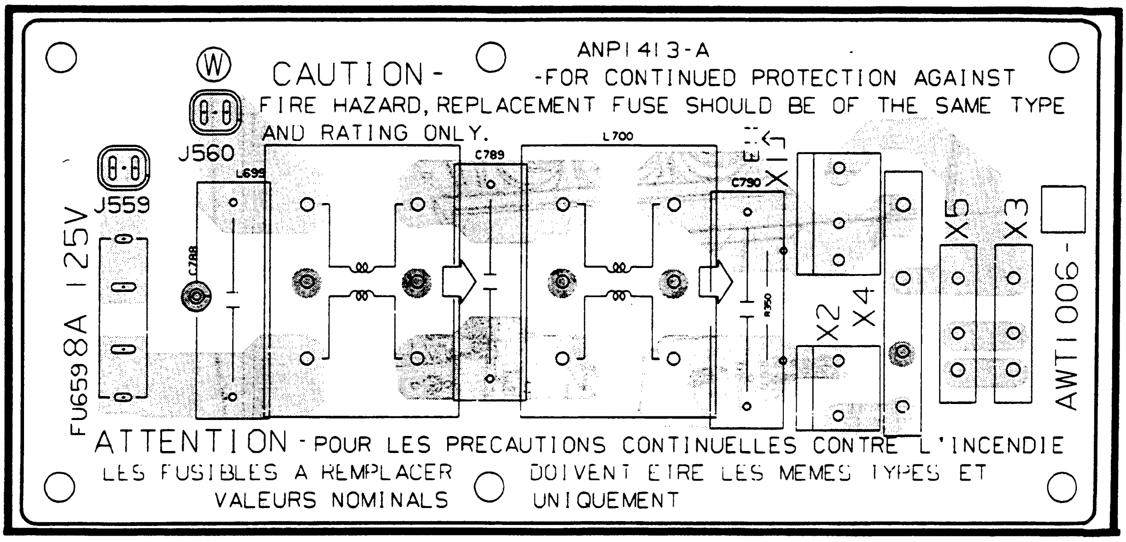
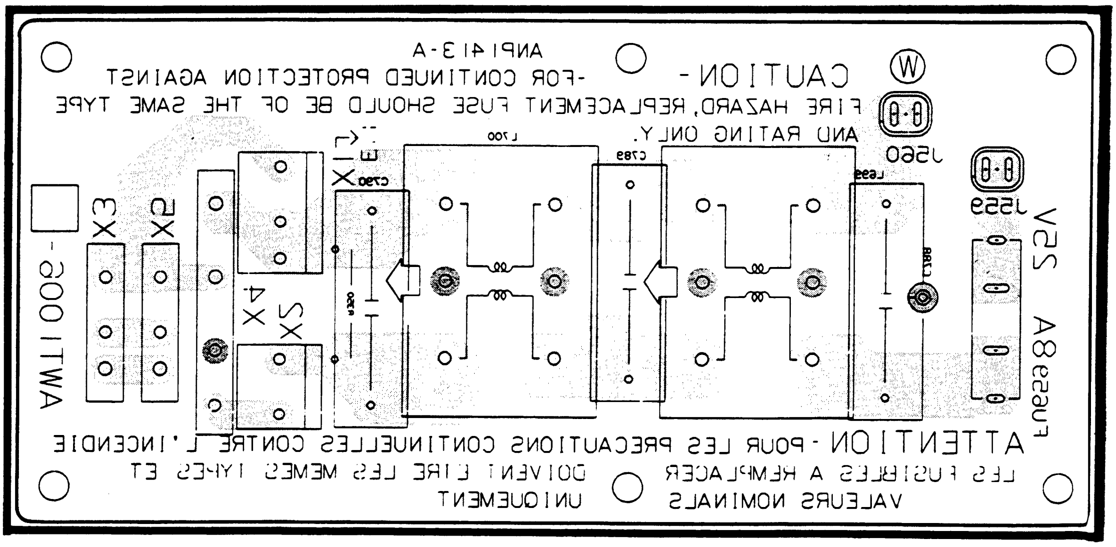
LINE FILTER ASSEMBLY (AWT1006)

This P. C. B. connection diagram is viewed from the parts mounted side.


ANP1413-A
CAUTION - -FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY.
W
J560
J559
L699
C789
L700
C790
C788
R350
X1
X2
X3
X4
X5
AWT1006-
FU659 8A 125V
ATTENTION - POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEMES TYPES ET VALEURS NOMINALS UNIQUEMENT

This P. C. B. connection diagram is viewed from the foil side.


ANP1413-A
CAUTION - -FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY.
W
J560
J559
L699
C789
L700
C790
C788
R350
X1
X2
X3
X4
X5
AWT1006-
FU659 8A 125V
ATTENTION - POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEMES TYPES ET VALEURS NOMINALS UNIQUEMENT

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E Q504	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

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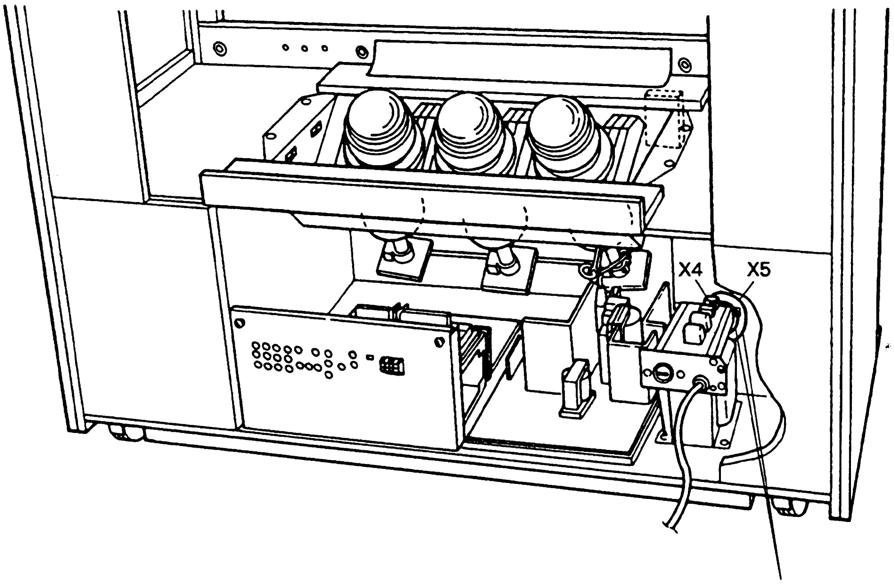
6. WIRING DIAGRAM



Ensure that the lead wires of X4 and X5 are at the right side of LINE FILTER assembly.

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